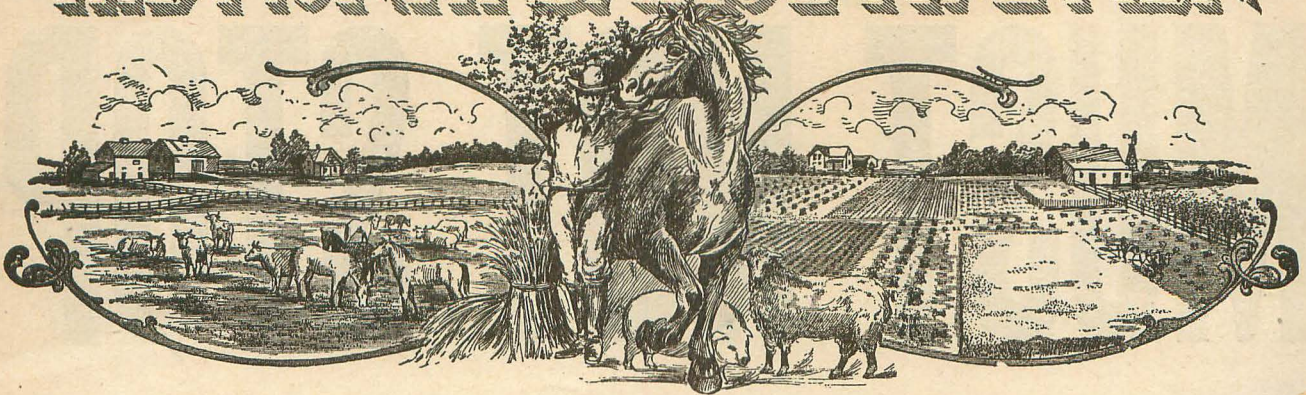


Shall Our Farmers' Institutes Cease? See Next Page.

THE NORTH DAKOTA FARMER



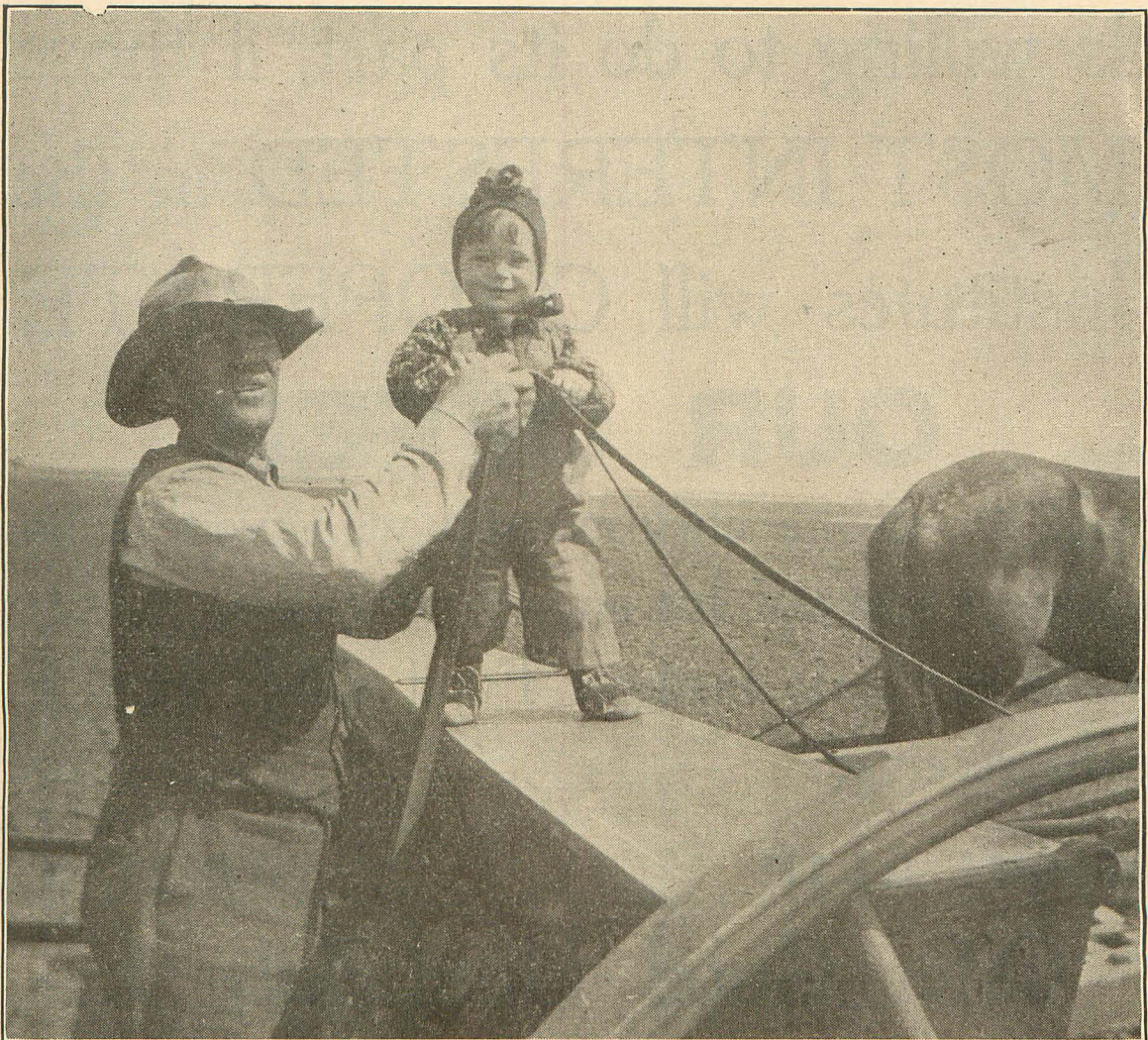
"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMERS"

Vol. 12 · No. 10

Lisbon, North Dakota, April 15, 1911

50 Cents A Year

Alex Allen



After All, This Is What Makes Life Worth Living

978.4
N814
Graham

The FARMERS INSTITUTES OF NORTH DAKOTA

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The North Dakota Farmer

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MOST INTERESTED in the
Institutes will **CO-OPERATE.**

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NORTH DAKOTA FARMER

LISBON, N. DAK.

THE NORTH DAKOTA FARMER

Vol. 12, No. 10

LISBON N. D., APRIL 15, 1911

50 Cents a Year

Make Farming An Exact Science

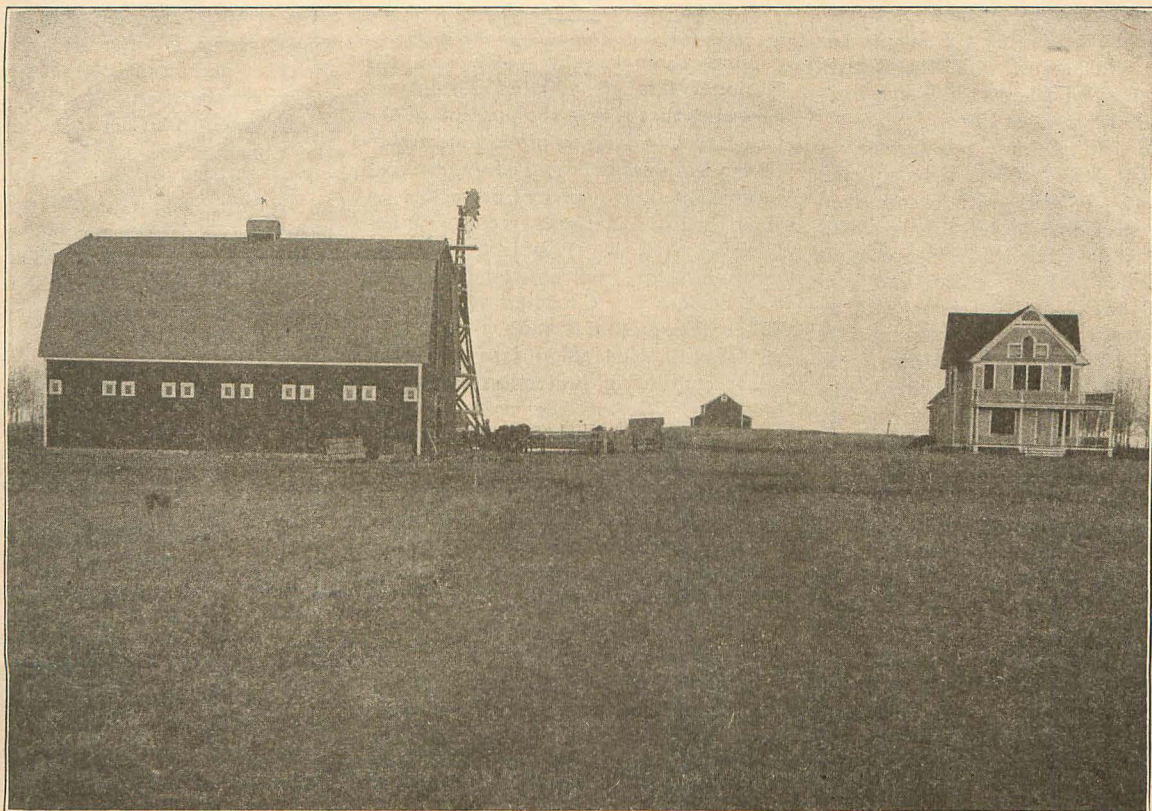
By J. H. Worst, Pres. N. D. A. C.

There is something extremely fascinating about gambling. There must be or so many would not stake their substance upon seductive and generally losing games of chance. The idea of getting something for nothing seems to be so alluring that thousands go broke

sters. Less of a sure thing seems more satisfactory than a possible big, but uncertain, stake.

But what has this to do with the farmer? Everything. The science of farming, so far as it is a science, consists in doing the right thing at the right

is the very essence of sure-thing farming in a country of limited rainfall. To depend upon uncertain showers—showers that may or may not fall when moisture is needed, is simply taking the gambler's chance. It is betting a season's labor and investment against the probabilities



View of the Kruger Farm Near Oriska.

annually by balancing their good money against the other fellow's cards, and often marked cards at that. When bitten, the victim frequently, instead of reforming, plunges deeper into the game with the hope of beating the other fellow and thus recovering what was lost. To say this is foolish business is putting it mildly. The rule applies to every variety of gambling, whether with the natural elements or with human trick-

time in the right way. Water, at the right time and in sufficient abundance and where it is wanted,—viz., where the plant roots can get it, is absolutely essential to produce a crop. There is no time between seeding and harvest when even insufficiency of moisture will not injure the crop, while a protracted drouth will destroy it utterly.

To insure the growing plants abundance of moisture at all times, therefore,

that it will rain exactly when rain is needed. On the other hand, if sufficient precipitation occurs at any time during the year, it can be stored in the soil where it will be available for the growing plants at all times between seeding time and harvest. Thus the element of chance is practically eliminated and a sure thing substituted, instead. Farming is reduced to an exact science instead of being a hazardous game. Work—

more work, intelligently applied to the soil in the form of scientific tillage, insures this difference. Nothing else, short of actual irrigation, will. This is why the grain seeded on corn stubble stands up green and rank, while grain seeded on wheat stubble often languishes and finally withers. As much moisture fell on the wheat stubble ground as on the corn field, but the cultivation given to the corn—conserved the moisture. The loose soil surface, resulting from frequent cultivations, so hindered evaporation that the residue of moisture, held over the year, was sufficient to so supplement the spring and summer showers as to produce a bumper crop, where fields cultivated by ordinary unscientific methods simply dried up.

There is no question but that sufficient precipitation occurs in all parts of North Dakota, if conserved, to insure a bumper crop every year, hailstorm, hot winds, and insects excepted, of course. We have but little to fear, comparatively, from these latter named agricultural enemies. Thirst, however, is the great crop enemy the farmer has to dread and against which he will direct his energies if he would insure himself and family against loss.

In the arid regions, the farmer resorts to irrigation. That is, he supplies the growing plants with water conducted thru ditches on to the fields where it is distributed. The process is costly and the labor severe and constant. However, the farmer realizes that a certain amount of water must be applied to the land or crop failure is inevitable. The game of chance is too one-sided there for even a farmer to risk it. As a result, he applies the amount of work necessary to water his fields.

The farmer operating in regions of limited, but sufficient rainfall, like North Dakota, has as sure a thing, so far as moisture is concerned, as the irrigation farmer, with this difference: the irrigation farmer gets moisture by means of the ditch while the North Dakota farmer conserves moisture by means of the subsurface packer, the drag, and the weeder. Both systems require work and the latter is a sure here as the former is in Colorado—if worked with equal zeal and intelligence. The fact that occasionally it rains just when rain is needed, too frequently warps the judgment of the farmer, for if, without effort, he gets abundance of moisture one year, he is apt to lose several crops, wholly or in part, while waiting for another similarly favorable year.

North Dakota has plenty of moisture, provided none of it at any time is wasted; provided it is conserved. Otherwise, farming is more or less of a

gamble, as many of us can testify.

But why take all these chances? Why not master the problem of tillage and farm management and reduce the operations of the farm to such a scientific basis that the harvest can be foretold with considerable certainty? Suppose it does take a half more work—or even twice as much work as is required under the system where failure is fairly courted, will it not pay? Will it not pay better to scientifically farm 160 acres with an almost certain yield of 25 to 40 bushels of wheat per acre, and other things in proportion, than to farm

double the amount of land, employing no more labor than should be put upon the smaller area? In good years the latter method might prove more profitable, but in the long run, it will pay to give land all the cultivation it needs to thoroly conserve the moisture. No farmer can afford to allow moisture to escape into the atmosphere in a country where the crop needs it all.

Real farming is one thing and manufacturing grain quite another thing. The average farmer would be better off if half his land were given all the cultivation the whole of it now gets.

Protection For All, or For None

Statement by Hon. N. J. Bachelder,
Master National Grange, before
Senate Committee on Finance,
February 21st, in opposi-
tion to Canadian Reci-
procity Arrange-
ment

More than twenty years ago the National Grange adopted resolutions declaring that it was the position of the Order that so long as protection was to be the National policy, the farmers must receive the same degree of protection on their products that was given on manufactured articles. This is the Grange position today, and we are here to protest against the Canadian Reciprocity Bill, on the ground that its effect will be to establish free trade in farm products, while continuing protection to manufacturers. We are here as representatives of the great agricultural industry of the United States to state clearly that the farmers of the country will not submit to legislation that so manifestly discriminates against their interests, and to assure you that without exception the farmers stand for the principle of—"Protection for all, or for none."

I need not occupy your time with arguments to show that this reciprocity measure means free trade in farm products. Canada is the only country from which we have at present any reason to fear competition, and if we have free importation of Canadian farm products, we will receive no benefit whatever from the tariff. The principle of protection laid down in the Republican party platform of 1908 is that the tariff rates should equal the difference between the cost of production at home and abroad, together with a reasonable profit to American industries. We are willing to submit the whole question as to the wisdom of the reciprocity bill to the standard fixed by this, the latest National Republican declaration on the subject.

Is it, or is it not, a fact, that the cost of

growing the great staple crops, such as wheat, barley, oats and hay; of raising cattle, horses and sheep; and of producing butter, eggs, poultry, cheese, apples, etc., is greater in this country than in Canada? We affirm that such is the fact, and would state in support of our contention the further facts that Canadian farm lands are much cheaper than on this side of the boundary line; that the wages paid farm labor in Canada are much lower than in this country; that the Canadian farmer buys his manufactured articles cheaper because of lower tariff rates on foreign goods; and that the farm lands of Canada are chiefly virgin soil, requiring no fertilizers, while our lands have been cropped for many years, so that we must use annually immense quantities of fertilizers.

Does any one deny that the average price of our farm lands is from two to three times that of Canadian lands? Is it not a fact that hundreds of thousands of farmers in our Northwestern states have sold their farms and emigrated to Canada, because of the great areas of cheap lands to be had in that country? It is notorious that so many farmers have left Iowa, where land is worth from \$100 to \$150 per acre, for the Canadian Northwest, that the population of that great and fertile state is now less than it was ten years ago?

The statements in regard to the other conditions which show the cost of production to be lower in Canada than in the United States are equally capable of proof, so that there is no escape from the conclusion that if protection is to be afforded to any domestic industry because of the higher cost of production in this country, agriculture, the greatest of all industries, which is the very foundation of this great nation's welfare and prosperity, is clearly entitled to protection equal to the difference between the cost of production at home and abroad.

The two principal arguments put forward on behalf of this so-called reci-

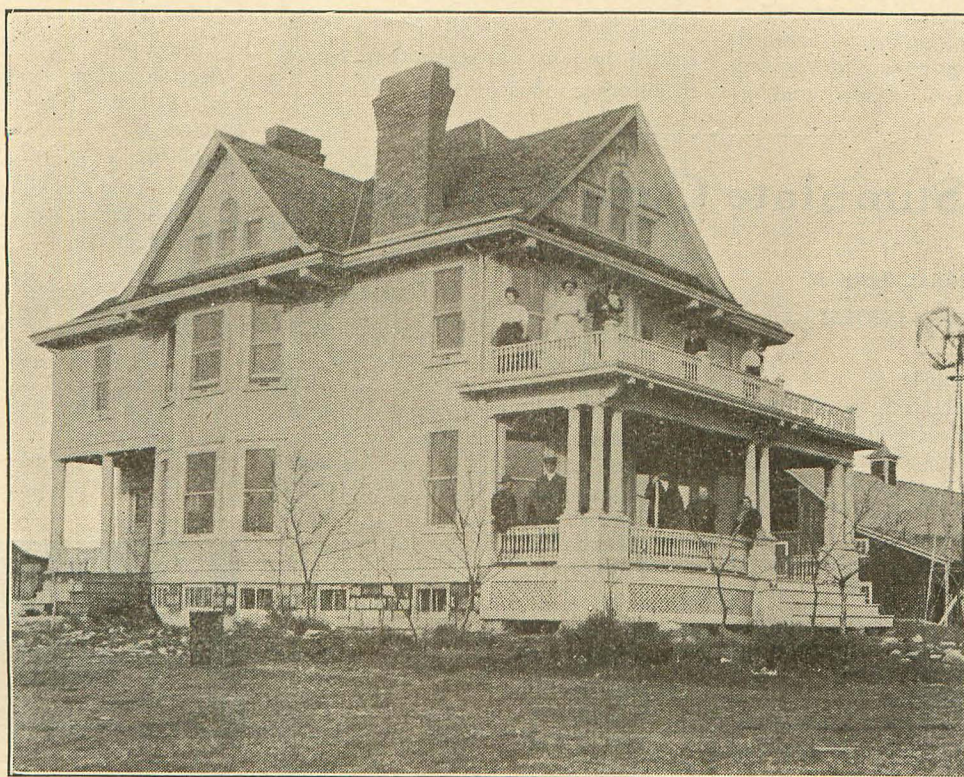
procuity proposition, are, first, that it will reduce the cost of food stuffs to the consumer; and, second, that it will not decrease the prices received by our farmers for their products. Both of these statements can not be true, and it is our opinion that neither of them are. The newspapers of the cities have been filled with glowing promises of cheap food, which they claim will be the result of the free admission of Canadian farm products. We believe this to be wholly a delusion, and that the removal of the duties on these products will not reduce in any material degree the prices paid for them by the consumers of the cities. Take for example milk. The duty on Canadian milk is now 2 cents per gallon. It has been shown by investigations con-

cents to \$1.00 per bushel at retail. It is absurd to claim that this great difference is in any way due to the tariff.

After having proved to their own satisfaction that reciprocity will reduce the cost of living, the advocates of this proposition, particularly Secretary-of-Agriculture Wilson and Mr. James J. Hill, turn around and assert that it will not in any way decrease the profits of our farmers. Unfortunately for these distinguished gentlemen, the facts are against them. The mere introduction of this bill has already forced down the price of wheat six or seven cents per bushel, owing to the existence in Canada of immense stocks of wheat, which, if this bill is enacted, can be rushed into this country. It is useless to tell us

total production being about 125,000,000 pounds. With the tariff of 6 cents per pound our dairymen are just able to make a living profit, and most of them have only existed because they have been taking more and more each year from the fertility of their soil. The Canadian cheese producer has cheaper land, cheaper labor, cheaper supplies, cheaper machinery, cheaper feed for cows, and a richer soil. The Province of Ontario, just across from New York, exported in 1909, 164,000,000 pounds of cheese. How could our cheese makers compete with those of Ontario, when the latter have so clear an advantage in the cost of production?

But we are told that while it is true that this bill deprives the farmer of the



Farmstead of S. J. Aandahl, Erected Last Fall Near Litchfield.

ducted by the U. S. Department of Agriculture, that on the average the farmer in this country gets for his milk 50 per cent of the price paid by the city consumer, the difference being absorbed by the middleman, railway company, and retailer. Suppose the duty of 2 cents per gallon on Canadian milk is abolished? Does anyone believe that the people of the cities will get their milk 2 cents per gallon less than the present price?

What is true of milk is true of practically all other farm products. I am told by State Masser Godfrey of the New York State Grange that in his section of the state potatoes are now selling at 30 cents per barrel or less. In New York City potatoes are selling at from 80

that reciprocity will not reduce the price of wheat, when the mere introduction of this bill has already had this effect.

And here let me point out that the price of wheat has fallen 30 cents per bushel since a year ago. Has the price of bread to the consumers of our cities fallen 25 per cent? You know that it has not, and if as the result of reciprocity the price of wheat is forced still lower, it will not benefit the consumer, for flour is still taxed 50 cents per barrel.

It is impossible in the brief time allotted me to go into details showing how the farmers will be injured by the provisions of this bill, but I will take as an illustration the manufacture of cheese. In the State of New York this is a most important branch of agriculture, the

very moderate protection, averaging less than 25 per cent, now given him by our tariff laws, he receives compensation in the form of reductions of duties on manufactured articles. This is not true. The reductions made by this bill will not in the least decrease the cost of the manufactures the farmer buys, since Canada is not to any extent a manufacturing country. Thus we have the Hon. Secretary of Agriculture stating that "free barbed wire fencing will be a boon to our farmers." As a matter of fact this provision will not benefit one farmer to the amount of one cent. We exported to Canada last year 100,000,000 pounds of wire, and imported practically none. The removal of this duty

is a fraud, pure and simple, intended to fool the farmers.

If this was an honest reciprocity measure, intended to encourage trade with countries which admit our products on favorable terms, it would provide for the free admission of all articles manufactured in Great Britain. That country has for many years allowed all our products to be imported free of duty, and it would seem only appropriate that we should reciprocate by admitting her products to our markets.

It is claimed by the distinguished advocates of reciprocity that the abolition of the duties on Canadian farm products is necessary in order to save the protective system. There could not be a graver mistake. Do these gentlemen really believe that 6,000,000 farmers will sit idly by, after the trifling protection now afforded them has been abolished, and permit the continuance of a system under which all the manufactured ar-

ticles they buy are taxed from 45 to 60 per cent? They should know better. We are here to serve notice that the farmers are united on this question, and are determined that if duties on farm products are reduced, the duties on manufactures must follow. This is not a threat. It is a simple statement of fact. It was said long ago by one of the greatest men this country or the world has ever produced—Abraham Lincoln: "This nation can not long continue half slave and half free." We are here to declare that our national policy of tariff taxation can not long continue high protection to manufacturers and free trade for the farmers, and we respectfully urge that every principle of common justice, fair dealing, and equal rights to all classes and citizens, demands that the farming industry be accorded the same protection that is given to all other industries.

To Stimulate Corn Culture

FIRST NATIONAL BANK OF FARGO'S CORN CONTEST

Preamble

Believing that the commercial future of North Dakota depends in a large measure upon better and more diversified farming and that more extensive corn raising and the feeding of hogs and cattle should be encouraged, The First National Bank of Fargo has decided to give the farmers of North Dakota cash prizes aggregating One Thousand Dollars for the best specimens of corn raised by them during the year 1911.

Conditions

The conditions of this contest are as follows: The state is to be divided into four districts:

District No. 1 comprising the counties of Pembina, Walsh, Grand Forks, Cavalier, Ramsey, Nelson, Towner, Benson, Eddy, Wells.

District No. 2 comprising the counties of Rolette, Divide, Mountrail, Oliver, Bottineau, Pierce, Williams, Mercer, Renville, McHenry, McLean, Dunn, Burke, Ward, Sheridan, McKenzie.

District No. 3 comprising the counties of Traill, Foster, Stutsman, LaMoure, Steele, Cass, Richland, Dickey, Griggs, Barnes, Ransom, Sargent.

District No. 4 comprising the counties of Kidder, McIntosh, Stark, Bowman, Burleigh, Emmons, Hettinger, Billings, Logan, Morton, Adams.

The Prizes

District No. 1.

Lot 1—Early Flints (Squaw, Dakota White, Gehu, etc.)

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00
Fifth prize.....	5.00

Lot 2—Late Flints (Mercer, Triumph, Longfellow, King Philip, etc.)

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00
Fifth prize.....	5.00

Lot 3—Red Dents (Northwestern, Bloody Butcher, etc.)

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00
Fifth prize.....	5.00

Lot 4—All other Dents (Golden Dent, Minnesota 13, Minnesota 23, etc.)

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00
Fifth prize.....	5.00

Section Championship—gold medal worth \$12. Total for District No. 1—\$240.00.

District No. 2.

Four lots and championship the same as in District No. 1.

A total of \$240.00.

District No. 3.

Lot 1—Red Dents (Northwestern, Bloody Butcher, etc.)

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00

Fifth prize..... 5.00
Lot 2—Yellow Dents (Golden Dent, Minnesota 13, Pride of North, Sunshine etc.)

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00
Fifth prize.....	5.00

Lot 3—White Dents (Rustler, Wisconsin 7, White Cap, etc.)

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00
Fifth prize.....	5.00

Lot 4—Any Flint.

First prize.....	\$ 20.00
Second prize.....	15.00
Third prize.....	10.00
Fourth prize.....	7.00
Fifth prize.....	5.00

Section championship—gold medal worth \$12.00. Total for District No 3—\$240.00.

District No. 4.

Four lots and championship the same as in District No. 3.

Total \$240.00.

Any Section.

Lot 1—Pop Corn.

First prize.....	\$ 7.00
Second prize.....	6.00
Third prize.....	4.00
Fourth prize.....	2.00
Fifth prize.....	1.00

Total..... \$ 20.00

Continuous No Break
Advance
17 YRS. THE SAME
Hog, sheep, poultry, fruit and farm fence. Sold direct to you at factory prices. You save all middlemen's profits. Endless stay wires—no cut ends. Freight paid. Write for freight prepaid prices before you buy.
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SPLENDID CROPS in Saskatchewan (Western Canada)

60 ACRE
FARMS IN WESTERN CANADA
FREE
800 Bushels From 20 Acres of wheat was the thresher's return from a Lloydminster farm in the season of 1910. Many fields in that as well as other districts yielded from 25 to 35 bushels of wheat to the acre. Other grains in proportion.
Large Profits are thus derived from the FREE HOMESTEAD LANDS of Western Canada. This excellent showing causes prices to advance. Land values should double in two years' time. Grain growing, mixed farming, cattle raising and dairying are all profitable. Free Homesteads of 160 acres are to be had in the very best districts; 160-acre pre-emptions at \$3.00 per acre within certain areas. Schools and churches in every settlement, climate unexcelled, soil the richest; wood, water and building material plentiful. For low settlers' railway rates and illustrated pamphlet, "Last Best West," and other information, write to Sup't of Immig., Ottawa, Can., or Can. Gov't Agt.
Chas. Pilling
Grand Forks, N. D.

Lot 2—Sweet Corn (acreage not required.)

First prize.....	\$ 7.00
Second prize.....	6.00
Third prize.....	4.00
Fourth prize.....	2.00
Fifth prize.....	1.00

Total..... 20.00

Recapitulation of prizes, as follows:

District No. 1.....	\$ 240.00
District No. 2.....	240.00
District No. 3.....	240.00
District No. 4.....	240.00
Any section—pop corn....	20.00
Any section—sweet corn..	20.00

Total.....\$1,000.00

Contest Rules

1. The show is to be conducted under

the management of the North Dakota Corn Growers' Association at their 1912 Convention.

2. The entries to close at the end of the first day of the show.

3. Entries to consist of not less than ten ears of corn.

4. All exhibits to be grown within the State of North Dakota during the season of 1911 by exhibitor.

5. Contest open to all competitors.

6. All entries must be from fields of five acres or more.

7. Competitors may complete in all lots but may make but one entry in each lot.

8. All entries not claimed by owner at the close of show to be sold at auction; proceeds to go to the North Dakota Children's Home Association.

Alfalfa

W. C. Palmer

Alfalfa is the king among hay crops, the queen among soil improvers, the prince among drought resistant plants. It comes nearer to giving something for nothing than anything else on the farm. It will produce more hay per acre, and hay of a higher feeding value than timothy, brome grass or western rye grass. In most of North Dakota it will produce more than clover, and especially west of the Valley, and has a higher feeding value. While giving that valuable crop of hay it will at the same time leave the soil richer in nitrogen and humus every year that it occupies the land, and supplies the very things that the grain crops take out the fastest and leaves the soil in the greater need of. Still the whole story is not told, as weeds cannot grow readily after the alfalfa gets a good stand and if they should grow a little the alfalfa is cut before the weeds are ripe so they cannot go to seed. The roots go deep and so open up the soil better than the subsoiler. The one disadvantage in growing alfalfa is that it is a little difficult to start; so when a good stand is secured it ought to be left for several years. It is not a good rotation crop like clover. This is really no great drawback tho, as it will produce a crop that is worth more than any other crop that can be grown.

Where will alfalfa grow and how should it be started? Alfalfa will grow on any good soil that is well drained; in sand it will not do so well, and hard pan interferes with its root growth. Standing water is death to it. When starting alfalfa it must be kept in mind that alfalfa has bacteria living in nodules on its roots. These germs furnish the plant with nitrogen which they take from the soil air. They put it into a form that the plant can use and so supply the alfalfa

with the nitrogen that it needs and more too. The alfalfa plant has in a measure lost the power of taking nitrogen from the soil as the other crops do, so it can not make much growth alone. It, in turn, furnishes the germs with food of a different kind so it is a co-operative affair, each furnishing that which it can secure the easiest. When the alfalfa is starting it does not have the germs on its roots and so is very delicate and must be given good care. The germs will multiply faster in the soil if it contains manure, and if the germs are not in the soil it may be necessary to introduce them. The best way to do that is to get some soil from a field that has been growing the alfalfa successfully for a few years and sow it on the new field at the rate of 200 pounds per acre.

For North Dakota the best way to prepare the soil is to manure for a crop of corn—clean cultivate the corn—then sow the alfalfa on the disced corn stubble, putting in eight to ten pounds per acre—and with the drill so as to get the seed buried, one to two inches—do not sow any nurse crop with it. A bare fallow that has been kept free from weeds will also be a good preparation, as will also potato ground. But in any case it should be manured. When the alfalfa is up eight to ten inches it should be cut back. This will not hurt the alfalfa; in fact will do it good—but will be hard on the weeds. Prof. Shaw recommends harrowing the alfalfa when it is up five to six inches. This will kill weeds and remake the dust mulch. When sown with the drill the plants will be so deeply rooted that it will not pull out many plants if the harrow teeth are set with a backward slant. The amount of seed sown should vary with the rainfall; under irrigation, or where the rainfall is

abundant, more seed than specified above should be sown. It was found at the Dickinson Sub-station that where the plants were nine inches apart three cuttings were secured in 1910 and the yield was nearly 2½ tons, while where the plants were only two inches apart only one cutting of about half a ton was secured. In digging out the roots it was found that where the plants were far apart the roots went down seven to eight feet while in the case of the plants that were close together the roots did not go down more than three feet. Another important point is to have a good covering on the field in the fall to hold snow.

The best seed to sow is that which is northern grown. The Grim has proven to be one of the most hardy strains. However, seed that is northern grown is in itself an evidence that it is hardy.

The alfalfa is not a pasture plant. It will not stand pasturing well, and cattle and sheep bloat very easily on it. It is, however, an ideal pasture for hogs. It will likely last two or three years under such treatment.

In starting alfalfa better start on a small patch and learn how to do it before experimenting on a large field. Use plenty of manure. Plant on corn, potato, or summerfallow ground. Introduce the germs. Sow without a nurse crop. Sow the last of May or first of June. Do not use too much seed. Remember that the alfalfa is delicate till it gets its partner on its roots—look for the nodules.

Don't Put Off Painting— It Will Prove Costly

The longer you put off painting the more oil and lead the job will take.

While you wait your buildings rot, exposed to the weather.

The cost of paint made of

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white lead and pure linseed oil is not so high as you may think.

For an average house, the cost now of this genuine old-fashioned, mixed-to-order pure white lead paint is not more than \$4 or \$5 greater than it used to be. Much cheaper than repair bills.

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Pittsburgh)



THE ESSENTIALS OF FLAX CROPPING FOR SEED PRODUCTION

By H. L. Bolley, Botanist

The Essentials of Successful Cropping to Flax for Seed Production May be Briefly Stated as Follows:

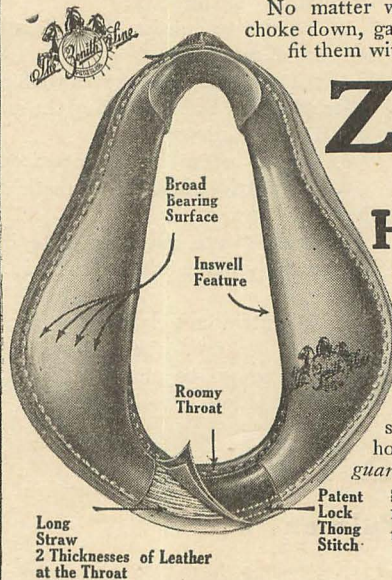
1. Proper preparation of a firm seed bed.
2. Selection of a good strain or variety of seed.
3. Selection of seed of full strength, free from internal diseases.
4. Grading the seed which has been selected until only approximately perfect seeds remain, blowing or screening out all bits of straw, chaff and dust possible.
5. Seed Disinfection—treatment of the seed by formaldehyde solution in such manner as to destroy all germs of flax diseases that may rest on or be sticking to the individual seeds.
6. Sowing the seed at essentially the proper date.
7. Drilling the seed at the proper depth.
8. Pulling or in other manner destroying scattering weeds in the crop, the seeds of which are difficult to remove from flax seed after it is thrashed, as for example, mustard, false flax, French weed.
9. Harvesting the crop at the right date so that the seeds shall be mature and plump, but not lost thru shelling or injured by weather.
10. Cut it with a binder wherever possible.
11. Thrash it at the first opportunity after the boles become dry.
12. Previous to harvesting, select the portion of the field which is most evenly ripe, harvest, thrash and save it for your own seed and for seed for selling to others.
13. Store the seed so that it shall remain dry and cool.
14. Conduct a decent, long series rotation on your farm. Do not think of sowing flax more often than once in five years on the same land.
15. At least one well cultivated crop, one crop of hay and pasture should intervene between flax crops.
16. In using barnyard manures never use any uncomposted manure which has been made out of flax straw or by animals which have been fed flax screenings.

Preparation of the Seed Bed: We have discussed this feature in other bulletins, notably Press Bulletins 39 and 40. The science of flax cropping rests in the fact that the flax crop loves a firm solid ground. After deep plowing, make it firm and solid in any manner that you can arrive at that condition, just so you do not puddle the land while it is wet. Never work it except when it is in good garden tilth. Then work it with any

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No matter what the work, your horses will not choke down, gall, nor have sore shoulder points if you fit them with

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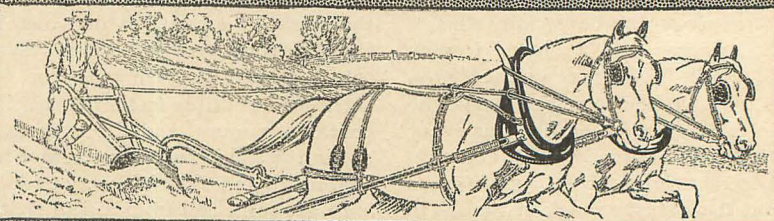
Horses can throw their whole strength against the broad, perfect-fitting Zenith collars without flinching on account of tender shoulders. Zenith Horse Collars are so well made that you get a printed guarantee with every collar. These collars are shaped to fit, the "Inswell" following the horse's neck to a nicety, and they are guaranteed for 3 or 5 years, according to grade and style. Buy collars that can not lose their shape or ever break at the throat—they are economical.

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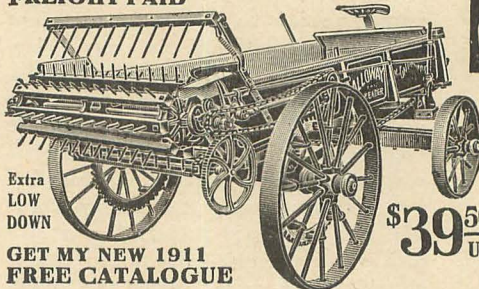
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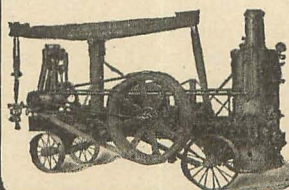
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tool which will firm it down so that it is so firm that the disks of the drill will not cut deeper than half or three quarters of an inch below the surface even tho the weight of the whole drill were on the disks.

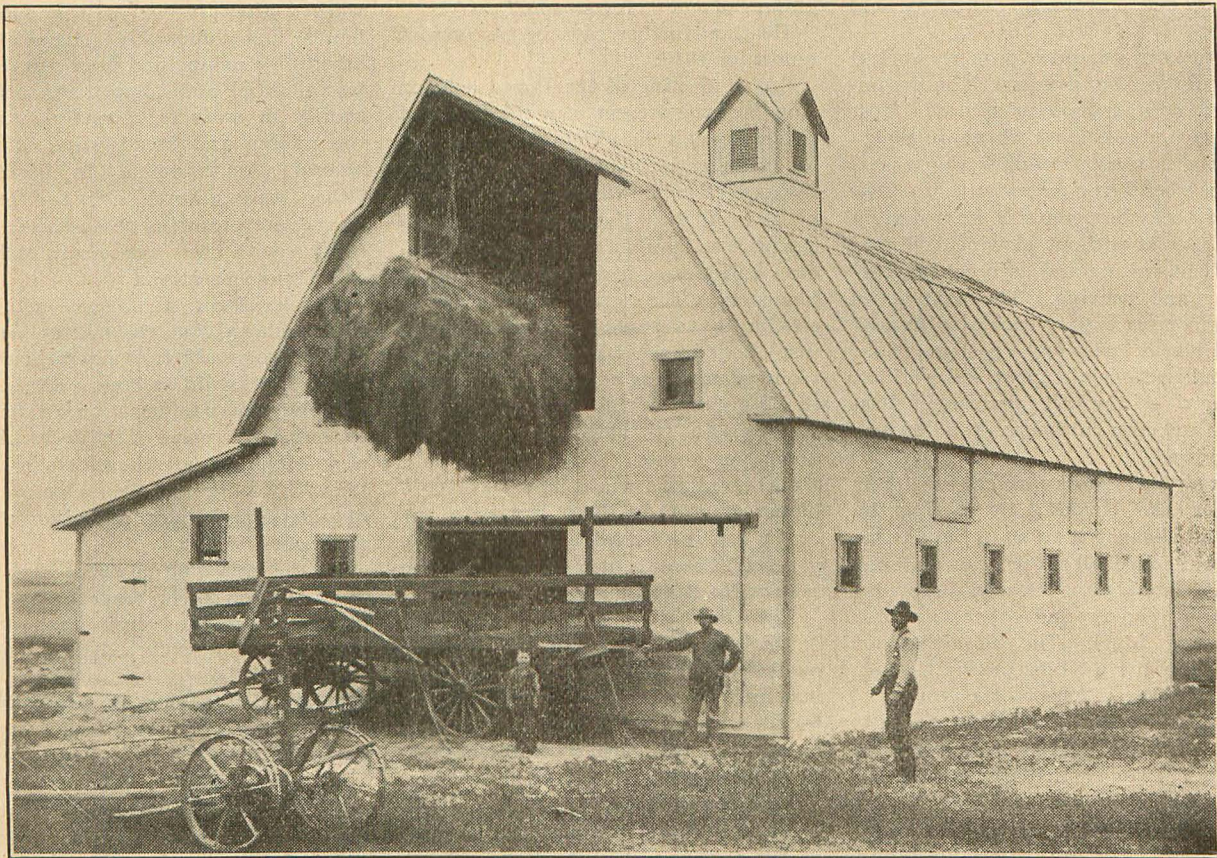
New Lands: New sod lands give best results when the breaking and firming, disking, harrowing and drilling of the seed and smoothing are all done at one and the same operation or in immediate succession, because the land does not have time to dry out and the flax gets a fine start in the moist land just turned up and worked. The surface working

did crop when surface worked and packed down again, and the seed drilled on this firm ground. In case the lands are foul with weeds the plowing should not be done until the time to seed the flax, and the work, as in case of new land, should be done as a continuous process. First plow, followed by heavy packer, followed by peg tooth harrows and further packing if necessary, then by the drill followed by stone float or by further packing with roller if necessary.

Soils Vary: Every man will need to consider his own type of soil and use the kind of cultivation or packing which will

not advisable to plant light weight, shriveled seed, sowing more seed to make up. That is the first principle of flax crop destruction. The weak seeds are the sick ones and carry death to their neighbors.

Seed Selection and Grading: Get a pure strain or variety of seed, if you can from your nearest neighbor. It should be bright and plump and every seed should grow in from three to four days when placed in a simple germinator. Perfect flax seed will show no mould in the germinator. No matter whose seed you get or have, run it thru a good fanning



"Pitching" Hay on the Farm of G. M. Fassett of Rolette County.

should be sufficient to leave the cracks between the furrows all filled in with new dirt. A heavy stone float, boat or roller should follow the drill for levelling and firming the soil upon the seed. If the breaking was done the year previous, then as soon as the frost is out of the ground the land should be harrowed or cultivated and should be kept stirred until time to sow the flax to prevent weed growths and loss of moisture.

On Old Lands: Good crops of flax can be raised on old cultivated lands but more care must be taken to firm down the soil. Preferably, it should be sown upon newly broken pasture or hay lands as described in the last paragraph, but it will do well after corn or if the lands are free from weeds, it will give a splen-

leave the ground least liable to blow, but accomplish a thoroly even, very hard firm seed bed with just enough dirt to nicely cover the seed.

Date of Seeding: Seeding time in most regions should usually be the earliest date possible without having the young plants frosted in the spring. In North Dakota May 15 to June 1—sometimes the late seeding from May 25 to June 2nd give big crops in the Northwest but this crop is liable not to ripen evenly in the fall after the cool nights set in.

Rate of Seeding: Sow not to exceed fourteen quarts of good flax seed on any soil. If all the seeds grow, twenty to twenty-five pounds of seed will give plenty of plants. They will be sturdier and give better seed production. It is

mill or grader and eliminate everything but plump, bright seeds. It is safer to sow weed seeds than it is to sow shriveled, dark colored flax seed.

Treatment: Treat the seed with formaldehyde, using standard formaldehyde at the rate of sixteen ounces avoirdupois to forty gallons of water. Use a spray pump which will throw a forceful, misty spray. After the seed is all cleaned in the fanning mill, throw it down on a tight floor or canvas and rake or shovel it over while it is being sprayed with the solution. Rake, spray and shovel slowly until you have put on at least one-half gallon of solution for each dry bushel of seed flax. Pile the flax up in a pile, cover with a canvas and it will be right to sow in approximately two

hours. Treat in the morning that which you wish to sow in the afternoon. Treat in the afternoon what you expect to use in the morning. Caution: **While the flax seed is being sprayed be sure to stir it thoroly and, if it happens that you cannot seed it, then it must be spread out to prevent heating.**

Rotation: Different farmers will obtain good results with different series of rotations because their lands are of different types. Each man should study his own land, but he cannot expect to succeed without crop rotation.

Starting with new land try something like this: (1) flax, (2) wheat, (3) meadow, meadow and pasture, (5) corn, (6) wheat or flax.

If the corn ground is properly worked flax will probably pay as well on the unplowed corn ground as wheat. Most persons prefer to sow wheat, in which case the flax should follow the wheat, the seed bed being made by thoro disk-ing of the wheat stubble immediately after harvest without plowing, followed by fall harrowing and early spring harrowing and packing. The next series could then run oats or barley, cultivated crop, wheat, meadow, pasture, flax. The cultivation is a great soil purifier, getting rid of the wilt organisms. Pasturing and corn cultivation tend to firm the ground.

Harvesting: Most farmers ruin their flax for seed purposes by cutting the flax and allowing it to lie in bundles on the ground until all of the straw and seed becomes mouldy and the seed thoroly infected by canker and other flax root destroying fungi. The advantage of harvesting with a binder rests in the fact that the bales are kept off the ground.

Flax Is Not Hard on Land: Our experiments have proved from all sides that flax is not particularly destructive to soil from a chemical standpoint. All the troubles which flax growers have had in past years are essentially due to the introduction of the wilt diseases in the soil by the way of infected seed and consecutive flax cropping.

VELVET CHAFF WHEAT

It is interesting to note what the Supervising Inspector of Local Warehouses for Minnesota has to say in his annual report with regard to the subject of Velvet Chaff Wheat. He first quotes from his report to the Commissioner for 1909 as follows:

"An observation covering two grain seasons convinces me that a mistake was made by the State Board of Grain Appeals in establishing a separate classification for velvet chaff wheat, and that the farmer is the loser by this innovation. It has been used to establish a much larger arbitrary difference in the

price of the corresponding grades of this wheat and that of Northern than really should exist. This is proven by the fact that in the beginning of the new grain season the difference arbitrarily established has been as much as 10 cents per bushel, while later on it has narrowed down as low as 2 and 3 cents. That this does not help the producer of velvet chaff requires no further argument. The amount of velvet chaff wheat raised here in this state disappears almost entirely in the other varieties, and about the only place, and about the only time, it manifests itself is at the local elevator and in the beginning of a new crop season."

He then further says in his present report for 1910:

"At a meeting of the Board held on Aug. 9 of the present year the Board of Grain Appeals did eliminate this separate classification, but it did not remedy the real trouble which farmers complained of, viz., the discrimination in the price as between this and more common varieties of spring wheat, such as blue-stem. The price discrimination continued at terminal and local markets just about in the same ratio as in previous years, being as high as 7 cents in the beginning of the crop season, and then gradually narrowing down to about 3 or 4 cents.

"None of this wheat now receives a higher grade than No. 2 Northern, except where it is mixed, and the price has generally been about 2 cents under the regular No. 2 Northern.

The elimination of the classification of this velvet chaff wheat was also immediately followed by warehouse men marking their storage receipts issued for such wheat No. 2 Northern "V. C.", in order to distinguish such stored grain from the regular No. 2 Northern grade.

This was done to protect themselves in the eventual presentation for sale, or for delivery, of such stored wheat. I have been unable to find any authority in our grain laws for such an innovation, and yet I am compelled to admit the necessity and justice of the same, from a business stand-point. If no distinction were noted on the No. 2 Northern receipts, the holder could, and doubtless would, demand the higher price, or the delivery of the regular No. 2 Northern wheat. And in view of the lower milling price for this wheat this would be manifestly unfair.

The whole trouble in this controversy grows out of the fact that the millers insist on buying this wheat, regardless of its weight and condition, for a lesser price than the regular spring varieties, and they are the ones who fix the price which, in the end, reflects itself back to the producer. Whether the action of the millers in this particular controversy has always been fair is a proper

subject for discussion and investigation. If this velvet chaff wheat or any considerable percentage of it, is ground together with the hard spring wheat varieties, why should there be so great a difference in the price? This is the real issue in this controversy, and the one in which our farmers are particularly interested. They want to know whether this arbitrary price difference made by the millers and followed by terminal and local grain buyers is a just and reasonable one, and the remedy is, perhaps, close at hand:

"Publicity as to what becomes of the velvet chaff wheat, or any other kind of wheat, after it leaves the farmer's hands, and comparative chemical and laboratory milling and flour tests made by impartial and competent state authority in order to correctly establish the milling and bread value of these several wheats would be beneficial. Other states, North Dakota, for instance, are preparing to do this in connection with their agricultural colleges or experiment stations.

* Our legislature took some action of this character, but the matter has not as yet progressed to a practical condition. If this will be done, and the correct and proper information obtained as to the relative value of the several kinds of wheat, I am sure the raisers of it will know how to protect themselves so as to obtain proper prices, regardless of the name of the wheat.

At the present time there is nothing but confusion in this respect, the miller insisting that the velvet chaff is not worth as much as the other, and many farmers maintaining the contrary. **The true situation should be promptly established by competent and impartial authority."**

It is this clearly evident that it is recognized that velvet chaff wheat has been discriminated against, and the Chief Inspector for Minnesota has recommended that justice be done to this class of wheat. The statements made the Inspector bear out the findings which this Department has from time to time published during the past year with regard to the relative value and bread-producing quality of velvet chaff wheat.

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N. D. Institutes Must Not Stop
See Page Two

STOP THE SALE OF FAKE EVENERS

D. A. Taylor

The Experimental Station of North Dakota is an institution that is interested in helping the farmers to make more money and as "a penny saved is a penny earned" I presume it is also interested in helping them to save money. I believe that I know of one way it can help the farmers to save some money and if I have addressed this letter to the wrong department, I wish you would let me know who to write to.

In using four or five horses abreast on a gang plow it is necessary to use one horse on the plowed ground or the plow will not run right. If one horse is used in the furrow and the rest on the unplowed ground, there is a "side draft." Now, it would be a fine thing if this "side draft" could be avoided as it is hard work for a horse to walk on fresh plowed ground, but there is no way to avoid it and the object of this letter is to stop the sale of a lot of high-priced eveners that are sold for this purpose. It is impossible to assemble any combination of levers, angles, and joints that will do away with the least bit of side draft.

These eveners are advertised in numerous farm papers, mail order catalogs, etc., and the only thing that sells them is the claim that they do away with side draft, and they do not. They are sold for about double the price of common eveners that are just as good. Any common evenner, especially the four-horse, will work very well if it is made pretty short. If the evenner could be made short enough there would be no side draft but the horses must have room to work; the people who make these patent evenners probably know this as their evenners are always made as short as possible.

The strange part of it is that many farmers will use these evenners, especially the four-horse, right along and never suspect they are not doing what is claimed for them. There are lots of these evenners sold in this state. They are sold by mail order houses and by local machine men, and if there is no law to prevent advertising and selling such fakes there should be.

There is such a thing as perpetual motion—the earth revolves upon its axis; but God Himself cannot do away with side draft, and never tried to; and, altho, it would be nice in some ways if man could contrive such a device, it would spoil some of the most valuable laws of nature, and I, for one, would be sorry to see it done.

REPORTS AND BULLETINS

Are you interested in any of the matters presented in any of the reports or bulletins mentioned below; if so, then write to the North Dakota Agricultural College for copies.

Bulletins in German: Press Bulletins No. 39, North Dakota Experiment Station, "The Growing of Flax on New Land" and Press Bulletin No. 4, "The Growing of Flax on Old Land" have been issued in German. Any one who desires bulletins in German or who has friends who would like them should send in their names to the Experiment Station, Agricultural College, N. D.

Norwegian Bulletin: Press Bulletin No. 42 North Dakota Experiment Station, "The Essentials of Flax Cropping for Seed Production" by H. L. Bolley is just from the press and is issued in both English and Norwegian. Any one who desires bulletins in Norwegian or who has friends who might desire them should send in their names to the Experiment Station, Agricultural College, N. D.

Alfalfa Bulletin: Press Bulletin No. 43 is by L. R. Waldron on "Alfalfa." It treats briefly of the soil, inoculation, seed and seeding, and care of crop first and second season.

"Who can Help Save the Flax Crop of the Northwest" is the title of Press Bulletin No. 41. Prof. Bolley shows how 1st, the seedsmen; 2nd, the elevator men; 3rd, the farm implement men; 4th, the druggist; 5th, the hardware merchant; 6th, the real estate men; 7th, commercial and business clubs; 8th, newspapers; 9th, the farmers themselves—all are concerned in the saving of the flax crop. He claims that it is worth while to make the flax crop a permanent one, and if these nine agencies

do not lend a hand the flax crop will be lost to North Dakota as it has been lost to all of the states to the South and East from New York to Iowa and Minnesota.

In Paint Bulletin No. 5, North Dakota Experiment Station, Prof. E. F. Ladd reports the analysis of a number of paints. "Moore's House Colors," "Atlas," "Derbey," "Excelsior," "Becker-Moore," "Elastic Cottage Paint," "Columbia House Paint," "Pure Ready Mixed," "Strictly Pure Dutch Process White Lead," "Famous Strictly Pure White Lead in Oil," "English Standard White," "Master Painter's White," "Luray White" are the brands reported on.

The following articles are given in Special Bulletin No. 31, Food Department, N. D. Experiment Station: Meat Inspection and Disease, An Address on Meat Inspection by Dr. L. Van Es, Sulphites Condemned, Meats Should be Clean, Government Inspection not Sufficient, Tuberculosis Meat, Municipal Slaughter House Needed, Velvet Chaff Wheat, Tomato Catsup, Net Weight Food Products, Are Flox Seed Screenings Pionious to Stoch, What is Whiskey, and a number of food analysis.

HARROWING VS. PRAYING FOR RAIN

"If I were to come onto your farm and set 750 teams to work for a week hauling water onto a quarter section at the rate of four tons a day I would then only put on as much water as evaporates in a week when there is a good moisture content in the soil. This is the striking illustration that President Worst of the North Dakota Agricultural College gives of the tremendous amount of water that escapes by evaporation. He then concludes: "a thoro harrowing will stop this evaporation and save that amount of water."

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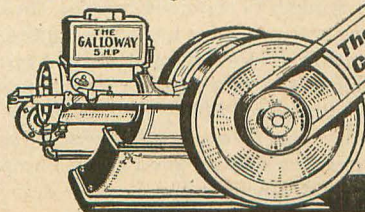
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See Page Two

North Dakota Farmer

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Vol. 12 APRIL, 1911 No. 10

The recent snowfall so general over all parts of the state puts the land in splendid shape and promises much to the farmers whose lands were becoming dry.

Old New England farmers used to say a good spring fall of snow to cover the ground recently thawed was as good as a dressing of manure and ensured a good crop for that year. North Dakota is much blessed then this year. The fall of soft damp snow furnishes the moisture that finds its way into the ground and unlike the rain does not pack the land.

While taking courage and going cheerfully about the spring work let us not forget that success depends to a large extent on our own effort as put forth. Poor farming never brings a good crop but bad cultivation in a dry season is sure to bring disaster, while good tillage will even in bad seasons furnish a fair crop.

Fertilizers are now an absorbing topic among farmers. Shall I use commercial fertilizers, is asked? If your land is deficient in any form of mineral plant food then that food must be returned to the land. If A's soil contain .08 per cent of phosphoric acid and B's soil has .24 per cent, then it is readily seen that the one soil is well supplied and the other deficient in phosphoric acid.

What will be the effect of low phosphoric acid in the one case and a good supply in the other. Poor crop. The wheat may grow and promise well but it never ripens, the grain is scanty and poor. Plenty of nitrogen, potash, etc., but lacking in phosphoric acid.

There are lands in this state having less than .08 per cent of phosphoric acid while there are others with .18 per cent, .24 per cent and even .32 per cent. Is the water in your cistern getting low, the water below the intake pipe for the pump? There is still some water but does your pump draw it. Is your check honored by the bank when your deposit is all out? And why not? When any man tells you that soils never become exhausted, have plenty of plant food for all time, mark him down as a doubtful prophet to follow.

Soils that are deficient in nitrogen, in humus or in organic matter may be replenished from the air by crop rotation and a judicious use of clovers or other legumes. The air furnishes no phosphoric acid, potash or lime. These must be added to the soil if you would increase the stock in the soil.

We have plenty of potash so far as I am aware in the soils of this state. Nitrogen is fairly well supplied in all our soils and in many soils abundant. We have soils, however, deficient in phosphoric acid and some in lime.

There is a difference between a soil having low phosphoric acid and a soil in which there is low available phosphoric acid. The last soil is not poor or deficient but the fertility—that is phosphoric acid—is locked up and not available in sufficient quantity to supply the needs of the growing plant. Cultivation, rotation and good management will put this soil right. Unlock the plant food and all is well. Some men do not recognize the difference between the two classes of soil, hence the bad advice, that is doing much harm.

Don't forget the garden. Health is a first essential to all our people if we would succeed and plenty of fresh vegetables are essential to good health. In summer good peas are better than meat for health and strength. Peas and beans furnish more muscle food than meat and should be more generally eaten in summer and winter; and these with eggs and milk from the farm with plenty of fresh vegetables for winter use, ensure good health for the children.

Much attention is now being given to destroying weeds on the farm. First see that the seed is free from foul weed seed and much good can be done in keeping down weeds. If the farm is already seeded to noxious weeds, then more drastic measures must be adopted. Cultivation and early maturing crops will help out. Spraying as recommended by Professor Bolley will be necessary for some classes of weeds. Use good chemicals and a good spray pump at the right time and much can be done.

If you are not posted, then send to Prof. H. L. Bolley, Agricultural College for bulletins and information and a good pump will be found advertised in this issue.

We are glad to note that careful experiments are to be made with several forms of commercial fertilizers this season. These experiments should give much valuable data as to what can be done by the use of fertilizers. We hope to be able to give the readers of the North Dakota Farmer something of the outcome of these practical tests as being made by experimenters in the state.

See that you have plenty of feed for stock to last another winter. Plant corn for feed, oats and peas, millet and other forage crops. It is poor economy to cut down the herd and then have to restock the farm again when the prices are high. No country can succeed that grows a single crop continuously. Crop rotation is essential, as is good cultivation. Last year two farmers with adjoining farms illustrated this truth, one with stock and diversity in crop harvested 20 bushels of wheat per acre, the other plowed his crop under. Continuous wheat cropping and the finish.

There is going to be trouble with eggs again this season. Too many old eggs, spoiled and unfit for use are sold to the consumer, some of these have come out of cold storage, but a large number come from the farm, where they are kept too long before sending to market. Any party who sells bad eggs is, under the food law, liable and farmers as well as merchants may be prosecuted for its violation.

For home use eggs may be kept fresh by using one quart of waterglass (sodium silicate) to 12 quarts of water that has been boiled. Put this solution in a jar or other vessel; keep in a cool place and each day add fresh eggs, keeping about one inch of solution over eggs. Eggs so put down will easily keep six or seven months in good condition for home use. Only strictly fresh eggs should be put down.

By all means keep in mind the garden, and have plenty of good fresh peas and beans, corn and tomatoes, radishes and lettuce, cabbage, and parsnip, turnips and beets, cucumbers and carrots. We fail to realize too often what all these mean: not only a saving in store supplies but better health and less doctor's bills. Home is the better for these things and children are happy and contented among such surroundings, and make better citizens.

See Page Two

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North Dakota is an agricultural state and always will be and her best interests will be built up around agriculture, her manufacturers will be mainly dependent upon agricultural products and so we are bound to become a great common wealth. We should keep this in mind and do what we can to promote the best interest of our state. The farmer therefore should organize and work to build up a great state and see that legislation is not adverse to his interests, which should also be the state's interests.

On irrigated lands at Williston last year they grew sugar beets with 21% of sugar and the beets averaged one and three-fifths pound in weight. Other varieties gave 18 and 20% of sugar. Where do they do better. Then why not see what can be done to get the industry for our state?

Snuff is soon to be a thing of the past, and so it should be. Good tobacco is bad enough for any man. Snuff has caused the undermining of the health and intellect of too many of our people. Not more in North Dakota than elsewhere perhaps, but that is no reason why we should allow it to be sold. It has been said that the sales in this state for a year amount to more than \$1,000,000 per year and special bulletin 29 of our experiment station tells about its use and the evils that come from its use. Send for a copy and read about it?

DELAYED, NOT BEATEN

It is a fair judgment, not a partisan claim, to say that the amendment for direct elections of Senators was merely postponed, not defeated, by the vote in the Senate last week. The amendment had already the support of the House of Representatives, several times accorded by the requisite majority of two-thirds. It had the endorsement, in one form or another, of most of the State Legislatures. One of the parties was thoroly committed to it, the other not committed against it, but plainly inclining to it. Now that it has come within four votes of a two-thirds majority in the Senate, where the opposition to it has always naturally been strongest, its champions are justified in feeling that the hard part of the long fight for it is over, and even in predicting that the next session of Congress will see it submitted to the States for ratification. Reluctance to make any change whatever in the Constitution has been, of course, a principal motive of its opponents. But those same opponents are for the most part quite as devoted to the amendments already incorporated in the Constitution as they are to the original document;

and of the amendments already adopted not one received so long a preliminary discussion as has been given to this proposal. If it is finally adopted, this particular change in the Constitution will be the most deliberate of all.—Harper's Weekly.

HERDS, FLOCKS AND HORSES

A little volume issued by the Pettibone Publishing Company of Chicago and written by Captain Wardell, entitled "Herds, Flocks and Horses" contains much valuable and suggestive information for farmers who are interested in stock-raising. It deals with cattle, sheep and horses and contains many valuable illustrations and is a good volume to be in the hands of any farmer interested in improving his stock.

The author recognizes the work which is being done by the Agricultural Colleges and Experiment Stations. He says:

"The Agricultural Colleges of this country, after years and years of patient, up-hill labor, preparing the people of America for conditions they knew must come and are now upon us, must contemplate with intense satisfaction the fruits of their labors and for the rich harvest of agricultural knowledge they are yielding."

MISLEADING AND FALSE ADVERTISING

Pick up almost any paper carrying a large number of advertisements, and note, when carefully read, how many contain statements that are not wholly truthful; how many are misleading and deceptive, either in the statements as made themselves, or in the description of the character of the product which is to be disposed of. Look at some of the patent medicine advertisements, note the claims that are made, which are preposterous, false and misleading, hoping thereby to induce some one (unfortunately, a much larger number than there should be) to become purchasers of the product, which in many instances are worthless. Read the advertisements that are on the labels of the patent medicine containers and even on food products, and above all those that we now see upon general articles that are to go into the home; and find how many, when carefully analyzed and compared with the actual products which are to be sold, show exaggerated statements.

To say in an advertisement that the "white lead and linseed oil used in this paint is guaranteed absolutely pure," when as a matter of fact, the total amount of white lead may be less than 5 per cent and the other 95 per cent

barytes, zinc, chalk, and like products, and when mineral oils constitute one-half of the liquid portion, is only one way of misleading the public by making absolutely false statements and claims which, nevertheless, are absolutely true when taken in the form in which they are worded. A small amount of white lead or of linseed oil present may be absolutely pure, but they have said nothing about the large amount of other material which has been added.

Beware of advertisers who resort to this method of attracting business. An exchange says:

"Money spent for printer's ink is thrown away, unless your advertisements are fairly and squarely backed up by the quality of your goods. You may be able to fool the people once, but if they once find out that your printed announcements are exaggerated or untrue they will not patronize you again, even if your advertisement should cover a whole page in your home newspaper. Never promise more in your advertisements than you are able to fulfill."—North Dakota Food Bulletin.

NORTHERN PACIFIC OUT WITH NEW BOOKLET ON NORTH DAKOTA

Pocket Size Publication Containing Article by Governor Burke. Will Distribute 100,000

The Northern Pacific has just issued another edition of its pocket size booklet entitled, "North Dakota and Her Boundless Resources," by Governor John Burke. The pamphlet is 24 pages and cover, and is well illustrated with cuts showing North Dakota's productivity. One hundred thousand copies have been issued, and they will be spread broadcast over the country, thru inquiries received in the General Passenger Department, thru the various local offices of the company in eastern cities, on the exhibit car which is now touring the state of Ohio, and in the several stationary exhibits which the company is maintaining at different points. This is bound to do North Dakota a great deal of good.

Copies may be had by addressing the General Passenger Agent of Saint Paul.

BEES HOW TO MAKE THEM PAY
The pleasures, the work and the profits of bee keeping are fully covered in "Gleanings in Bee Culture," 6 months trial subscription 25 cents. Write for book on Bees and free catalog—both free.
THE A. I. ROOT COMPANY, Box 78, Medina, Ohio

HONEY Well ripened clover Honey for Sale, guaranteed absolutely pure and of the finest quality. One 30-lb. can 11 1/2c per lb.; 2 or more cans 11c; 12-lb. cans, in full cases of 72 lbs., 11 1/2c per lb. Send for price list. Address
M. V. FACEY, Preston, Fillmore Co., Minn

Why? Where? When? How?

Have you a Query? Write the North Dakota Farmer

HOW TO TREAT THE LAND

I have a piece of land of some 15 acres lying close to west side of Bear Creek in Fort Ransom Township that has long been broken, and last sown to flax about seven years ago. This land is supposed to be Sioux loam according to the soil survey map of Ransom County, but I think it resembles Bearden loam or maybe Fargo Clay loam. The land barely drains on the surface at all times, but the subsoil seems to hold water so well as to make ground look watersick. In spots it shows some alkali and when plowed deeply a greyish clay is turned up. In wet seasons it grows up badly to sunflowers. When last sown it was full of yellow mustard. Now I would like to

when the land was last in crop seven years ago.

If this land does not drain well, so that water stands on the surface during early spring, it will be a mistake to sow alfalfa on it, as the forming of ice sheets upon the alfalfa in early spring is generally fatal to it. Alfalfa does not do well on alkali land.

I would guess that timothy and clover would make a success on this heavy land with a clay sub-soil.

If S. C. H. puts a grain crop on it, I would advise sowing wheat or barley instead of flax, as they are more sturdy and can make their way better against mustard than a flax crop can.

If S. C. H. is going to farm this piece of ground to small grain, he should first of all, clear up the mustard. In order

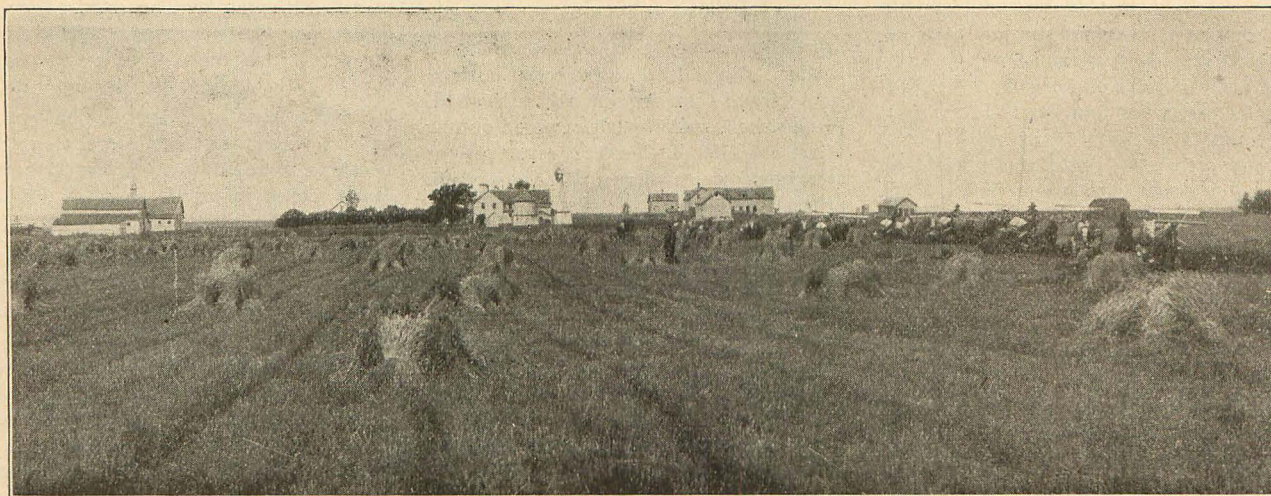
treating wheat with formaldehyde? After the wheat has been once treated, how many years would it be safe to continue to grow this wheat without further treatment for smut? I have good seed wheat which was sown last year without being treated. Would it be safe to use it another year without treating it and expect no smut,—the seed being free from smut at the present time? The land on which I am going to sow it is in good condition.

Forest River, N. D.

D. H. H.

Answered by Professor Bolley

Treating Wheat for Smut and Other Root and Blight Diseases. It is never safe to rely on wheat for seed without treating it previous to sowing. Experiments at this station which have been conducted every year for a number of years prove that formaldehyde treatment of wheat very much more than pays for itself even tho there is known to be no smut on the seed grain. We are not able to explain all the reasons. It is possible that the formaldehyde may ac-



The Nester Farmstead, Barnes County.

know if it would be advisable to break up this land again and sow it to flax; also if any kind of permanent grass (or alfalfa) could be grown on it. Kindly advise me in the next issue of North Dakota Farmer.

Fort Ransom

S. C. H.

Answered by Professor Shepperd

Replying to the inquiry of S. C. H., I will say that there is no reason why the field he describes should not produce flax satisfactorily if there was no wilt disease in the land seven years ago when it was last sown to flax, except that if it is heavily seeded to mustard, the flax will not have a chance to make a very good growth.

Mustard seed are not killed by being forced to lie dormant for seven years or twice seven years, and the fight will be as heavy against them now as it was

to do that he will have to cultivate the surface for a season, causing the mustard seed to sprout and then destroy them. He will have to repeat the process for those seeds which have been plowed down, as the mustard is too cunning to attempt to grow, if it is buried more than three inches deep. If the land is seeded down to grass, the mustard will remain dormant until it is broken up again.

My guess is that unless S. C. H. can go to the expense of clearing up the land from mustard seed, that he will make as much from it by sowing it to timothy and clover as by any other scheme which he can adopt.

TREATING WHEAT FOR SMUT

Would you please give me some information with regard to the method of

usually help the first growth from the seed, for it is evident that that first growth is very much stronger in treated seed than untreated seed even tho no smut is present. We have learned that numerous other parasitic fungi attack the wheat crop. Some of these produce spores upon the straw. These spores or seeds of the parasites rattle off at thrashing time and get dusted over healthy seeds that grew on plants that were not sick as well as those that were.

Seed disinfection not only destroys possible smut spores but does away with these other kinds of infectious diseases, killing the spores that may chance to be on the exterior of the grain. This probably, in large part, accounts for the increase of yield which is always noticeable in a formaldehyde treated crop of wheat.

The new types of parasitic diseases which I mention particularly attack the roots and cause them either to rot off in damp weather or to dry up in dry weather. Sometimes some of these diseases get on to the inside of the young grains before they are mature, thus causing excessive shriveling. This is another reason why grain should be thoroly graded so as to remove the light weight grains. If all light weight grains are removed and the seed is treated every year, a man will always be sure that he is sowing the best possible type of seed grain. Home grown wheat is much better than seed brought in from a distance, if it is properly prepared in the manner indicated, each year before sowing. Press Bulletin 33 will explain these matters more fully.

LUMPY JAW

Question: I wish you would advise me about what to do with a two-year old steer affected with lumpy jaw.

The steer is in good condition and the lump came on last March and has not run much—it is under the jaw and medium large. Now what I want to know is if I slaughter this animal, if the beef can be used for human food or not. Of course I do not want to sell it—it is for my own use—but I understand an animal affected with lumpy jaw is unfit for human food.

Kindly advise me what in your judgment would be the best thing for me to do.

Answer: In reply to your question, I beg to advise you that if the steer in question is in good flesh and good health outside of the affection of his jaw that it will be perfectly safe for you to use the meat for human food, provided that the affected head and such other parts as may be involved be carefully removed without soiling the rest of the carcass.

In case you wish to sell the meat to other people, it will be necessary for you to communicate with the State Veterinarian, Dr. W. F. Crewe, Devils Lake, N. D. in order to get the carcass inspected after slaughter by an agent of the livestock sanitary board.

The law prohibits the sale of any meat coming from an animal infected with an infectious disease and lumpy jaw belongs to them, but the law also authorizes the state livestock sanitary board to issue permits for the use of beef after they have been inspected.

THE TREATMENT OF FLAX

In your January 15th North Dakota Farmer there was an article on Treating Flax Before Sowing. I would like to ask if in your opinion the treating of flax has any tendency to hold the same

back and cause it to mature later in the season. If so, about what time in May or the fore-part of June do you consider the proper time to put the seed in the ground?

We had two hundred acres, not treated, last year in before June 6th, and two hundred and ten acres, which I treated, sowed up to June 16th. The first flax did well, while the treated showed signs of a much better yield, but seemed to be much slower and was caught August 24th, by frost which ruined all of the latter. Was this wholly on account of not getting it in early enough, or did the treating and extra stooling, caused by treating, hold it back? Should treated flax be sown earlier than untreated flaxseed?

Crosby, N. D.

F. E. P.

Answered by Professor Bolley

The treating of flax seed does tend to prolong the life of the crop and this, in all probability, in part accounts for the increased yield. I have many times observed that the untreated crop ripens up quicker than the treated. The early ripening appears to take place because nearly all of the plants are more or less attacked causing them as it were to die earlier. This often gives proper colored seed but of light weight and less yield. As in the case of properly sprayed potato vines the life of the crop after proper treatment seems to run perhaps a week or ten days longer.

The chief trouble with your crop was that characteristic of most crops last year; namely, the dry weather delayed the first development of the crop very greatly, then the late summer moisture came on with the cool nights of autumn and the flax continued to grow rather than to ripen. It is a characteristic of the flax crop that if not ripe before the cool evenings of the fall come on it will not tend to ripen very rapidly. It will put out new leaves and stronger growth of the stem. My belief is that practically all flax should be in the ground by June 10th, altho I have seen some very fine crops raised at a later period.

Regardless, however, of the fact that the formaldehyde treatment seems to extend the life of the crop, causing it to ripen later, it is necessary that all people should treat their flax seed because, to have a crop ripen up earlier due to disease, means a light crop, and, further, that that land henceforth is not very apt to raise any more flax until rotation has purified it. Not only that, it will be pretty sure to spoil much adjacent land due to the blowing of spores.

Question. Do prairie chickens do any damage?

Answered by Dr. W. B. Bell, N. D. A. C.

A small amount of damage may be

charged to the account of the prairie hens. There is some evidence that they destroy a little sprouting grain, pluck buds from fruit trees and eat grain in grain fields. But here again the good they do far outweighs the comparatively small amount of damage done.

The food consists principally of insects, seeds, fruit and grain. The grain is very largely gleaned from waste grain in harvested fields. Large quantities of weed seeds are also eaten, tho they are not so valuable in this respect as some other birds. The fruit eaten is almost entirely wild fruit useless to man.

The prairie hen performs a very large service in destroying noxious insects. During spring, summer and fall their crops are to be found packed with grasshoppers of practically all kinds found in the locality. The occasional well-known ravages of grasshoppers, when their numbers become excessive, serve to emphasize the importance of the natural enemies which tend to hold them in check and usually prevent their undue increase. The service rendered in the Dakotas by the prairie hen in destroying the young and adult grasshoppers much more than compensates for the possible damage they may do.

Prairie hens also destroy leaf-eating beetles, such as the Colorado potato beetle, a familiar pest in the Dakotas. Many other injurious insects also are eaten.

The value of the prairie hen as a game bird also is a large item in its favor. Here again only the surplus stock should ever be killed leaving plenty of birds to propagate for keeping up the supply.

In North Dakota where the law permits domestication of prairie hens there is an opportunity for developing a profitable addition to the income on every farm. They become tame very readily and multiply rapidly in captivity. They will feed among the other domestic fowl and the very high price which they now bring on the market and for purposes of propagation should make their domestication highly profitable. This is a matter that should receive large attention in the Dakotas and Minnesota. The birds have been exterminated in many parts of the country and there is a large demand for domesticated birds for restocking these localities as well as for the market.

For a more detailed report of their habits and value send to the U. S. Department of Agriculture for Bulletin No. 24 of the Biological Survey entitled: The Grouse and Wild Turkeys of the United States, and Their Economic Value.

N. D. Institutes Must Not Stop
See Page Two

Livestock Department

STOCK NOTES

N. J. Shepperd

Economical feeding is feeding to the best advantage.

It is not big gains that pay, it is economical gains.

Quick and steady growth from start to finish means economical gains.

There is no class of stock that likes a change so well as sheep.

One advantage with the farm is the opportunity afforded of raising strong men and women.

So far as can be done everything produced on the farm should be sold in a condensed form.

The profitableness of a dairy cow depends as much on the quality of the milk as upon the quantity.

The action of a horse reflects his temperament, proves the balance of his conformation and indicates the degree of soundness.

To supply food in the right proportions to meet the various requirements of the animal, without waste constitutes scientific feeding.

Weight increases the efficiency of the draft horse by making it possible for him to utilize his powers to the utmost.

A uniform lot of pigs will feed better, look better when fattened, command a higher price on the market than a mixed lot.

After the pigs are large enough to use all of the milk, the more milk-producing food the sows are given the better.

The interest of the feeder requires that the shortest possible time should be given to the growth of an animal intended for food.

To a very considerable extent the cow's future value depends upon the training and development she gets during the first two years or three years of her life.

The man who makes the most money on his hens is the man on the farm who can keep a large flock and raise his own corn feed.

Under average conditions a ton of poultry can be produced at less cost than a ton of any meat and will bring a much better price.

The foot in the draft horse should be full, round and with sufficient depth of heel and arch of sole to overcome the tendency to become flat.

The time to wean will depend on the way the pigs are eating and the con-

venience of the breeder. If they are not thoroly accustomed to a grain and skim-milk ration the time must necessarily be delayed, and if there is no occasion for breeding the sow, no harm is done by allowing the pigs to run with the sow until they are twelve weeks old.

The profitable dairy cow is one that will pay for her feed and pay for the labor of caring for her, and something more for profit. If she only pays for her food and the labor she is hardly a profitable cow.

HOGGING OFF CORN BECOMING POPULAR IN FARM ECONOMY

To "hog" or not to "hog" the corn field is a question that has its advocates in numbers great; likewise, it has its opponents. The preponderance of experience, however, is in favor of hogging off corn. Why? Because no warranted complaint ever has been lodged against it, except in wet years.

According to the University of Minnesota Experiment Station's observations, hogging off corn means that pork can be produced with less grain than by feeding ear or snapped corn in yards.

That hogs fed in the field gained nearly one-third more rapidly than those in yards.

That the cost of fencing corn fields may be from \$1.00 to \$2.50 less per acre than cost of husking the corn.

That hogs waste no more corn in the field than when fed in the yard, as they pick corn as clean as most men do in husking.

That the labor in caring for hogs is not increased by hogging corn.

But, hogs should not be turned into more corn at one time than they can clean up in two or three weeks.

When hogging corn the fencing should be done as early as possible, and once done the job is out of the way and the field ready for the hogs as soon as the corn is dented. As the hogging season is short, everything should be ready to turn in the porkers early. It is advantageous, because a couple of months can be put in by the hogs in the corn field whereas a late start may permit only four or six weeks.

Experienced men in the hogging of corn, fence in twenty or more acres when they have enough hogs to clean up the cereal. But for the beginner,

CLASSIFIED ADS.

One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

LIVE STOCK

HORSES

FOR SALE

Percheron, Belgian and Shire horses
J. W. & F. T. PETERSON, Litchfield, Minn.

MEADOWBROOK STOCK FARM. Clydesdales and Shetland Ponies, imported and home bred. Prices reasonable and terms to suit. Write or come and see me. **GEORGE LANG**, Mapleton, Minn.

CATTLE

North Branch Stock Farm. High class Short-horns. Herd, bull, Supreme Judge 177722—pure Scotch, John Donnelly, Grafton, N. D.

FOR SALE

GALLOWAY CATTLE
J. W. & F. T. PETERSON, Litchfield, Minn.

SWINE

POLAND CHINA PIGS, also Shropshire sheep. Seed grain. **GEO. N. SMITH**,
Amenia, N. D.

EGGS AND POULTRY

EGGS FOR HATCHING. Express prepaid, \$2 per 15, from pure bred Golden Wyandottes and White Plymouth Rocks (Fishels strain.) Choice stock for sale. Send for Catalog. **C. H. McGEE**, Oriska, N. D.

MISCELLANEOUS

Envilla Stock Farm, Cogswell, N. D. will quote you special prices on Angus Cattle, Shetland Ponies, Duroc Jersey Hogs, Wolf and Fox Hounds, Pure Bred Poultry, Pet Stock. Write them.

FAIRVIEW STOCK FARM. Breeder of Short Horn Cattle, Mammoth Bronze Turkeys and B. P. Rock Chickens. Young Stock for Sale
F. R. HAMMOND, Prop., Bismarck, N. D.

FOR SALE One of the finest and best improved farms in this county, 3 1/2 miles from Bowbells, part cash, worth \$5,000, for \$3,900.
H. L. Lyon, Bowbells, N. D.

240 ACRES FOR SALE, CHEAP

In Williams Co. N. Dak. Rich Soil, Small Buildings, Plenty of Water. Write to

C. W. BEARD, INDIANOLA, IOWA.

FARM FOR SALE—A fine half section, broke and well improved; 3 miles from town. Owner, **PERRY MOLES**, Sherwood, N. D.

100 Tons of Hay, 300 Cockerals and Tom Turkeys—choice ones. Buy now—special prices.
Envilla Stock Farm, Cogswell, North Dakota

RED-POLLED AND GALLOWAYS

Shropshire Bucks

J. S. BIXBY, - - LISBON, N. D.

WANTED We want a salesman in every town in North Dakota to sell our high grade line of Forest and Fruit Trees, etc. Write us for terms. **NORTH DAKOTA NURSERY CO.**, Flasher, N. D.

MEADOW LAWN FARM has for sale, high-class, Percheron Horses, Shorthorn and Polled Durham Cattle. Everything guaranteed as represented. Prices and terms most reasonable. Call or write your wants.
A. H. White, Kramer, N. D.

N. D. Institutes Must Not Stop
See Page Two

it may be better to start with two or three acres to a bunch of twenty-five pigs, which provides surely for the cleaning up of the corn before the snow comes.

The first thing to do, however, in hogging corn, is to get the fields fenced, and the details naturally will follow.

Stick a pin in the tablet of memory right where this thought should go: Good pastures are in most cases necessary for the economical production of pork. A four-years' rotation of grain, clover, corn and corn works satisfactorily on small fields for hogs.—American Fence News.

CARE OF THE PIG CROP

How We Save the Litters

W. B. Richards

Of course the size and vigor of the litters farrowed by the brood sows will depend very largely upon how they have been fed and handled during the time of pregnancy. Unless a sow is fed a ration liberal in protein and compelled to take exercise, large, vigorous litters can not be looked for. If the sows have not been properly cared for during pregnancy, there is all the more need for greater vigilance during farrowing time, or the period covered by this discussion.

We place the sows that are to farrow in a pen by themselves at least a week before farrowing time and we get them accustomed to having us go in and out of the pen. When in the pen we rub them along the underline and they will lie down at our bidding, soon becoming very quiet, and by this preliminary training you are much more apt to farrow them successfully if it is necessary to give them assistance. As fast as the pigs are farrowed, remove them one by one from the pen and place them in a basket or box where they can be kept warm. When the dam is thru farrowing, return them to her and start them to suckle. If this is done it will avoid many pigs being killed. The reason they are killed if they are left with the dam, is because they squeal on the least nervous and she will thrash around and kill the pigs, by possibly lying or stepping upon them.

We provide our pens with fenders around them. This will save many pigs from being crushed to death. Until the pigs are a week or ten days old we bed the pen with fine straw or chaff, for this enables the pigs to move around much more readily and get out of the mother's way when she rolls over, etc.

Before and after the sow farrows, she should be fed very light or the pigs will not be able to take all the milk, or if they do, they will become sick. Leave the sow quietly after she farrows for the first twenty-four hours at least, since

Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Caustery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENEY,
BONY TUMORS,
LAMENESS FROM
SPAVIN,
QUARTER CRACKS,
SCRATCHES,
POLL EVIL,
PARASITES.

REMOVES

BUNCHES or
BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

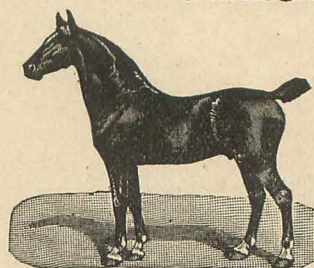
SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard
VETERINARY REMEDY

Always Reliable.

Sure in Results.



None genuine without the signature of
The Lawrence-Williams Co.
Sole Proprietors & Distributors for the U.S. & CANADA. CLEVELAND, O.

NOTHING BUT GOOD RESULTS.

Have used GOMBAULT'S CAUSTIC BALSAM for more than 20 years. It is the best blister I have ever tried. I have used it in hundreds of cases with best results. It is perfectly safe for the most inexperienced person to use. This is the largest breeding establishment of trotting horses in the world, and use your blister often.—W. H. RAYMOND, Prop. Belmont Park Stock Farm, Belmont Park, Mont.

USED 10 YEARS SUCCESSFULLY.

I have used GOMBAULT'S CAUSTIC BALSAM for ten years; have been very successful in curing curb, ringbone, capped hock and knee, bad ankles, rheumatism, and almost every cause of lameness in horses. Have a stable of forty head, mostly track and speedway horses, and certainly can recommend it.—C. C. CHAMER, Training Stables, 990 Jennings Street, New York City.

Sole Agents for the United States and Canada.

The Lawrence-Williams Co.

TORONTO, ONT.

CLEVELAND, OHIO.

CENTRE-LANE STOCK FARM

BREEDER OF: Black Percheron and Hambletonian Horses, Red Polled Cattle, Poland China Hogs, White P. R. Chickens, White Holland Turkeys, White Embden Geese, White Pekin Ducks and White Guinea Fowls.

GROWER OF: Minnesota No. 169, Spring Wheat, Swedish Select Oats, White Hulless and Success Beardless Barley, Turkey Red Winter Wheat, N. D. 959 Winter Rye, Northwestern Dent Corn, Early Ohio Potatoes, Timothy and Alfalfa.

Young Stock and Pure Seed, for sale. Write me for particulars.

J. A. ENGLUND, Prop.

Kenmare, North Dakota.

THE ENVILLA STOCK FARM

COGSWELL, NORTH DAKOTA

SHETLAND PONIES. 100 fine ones. Your own price.

REGISTERED ANGUS CATTLE. 25 must be sold.

HEAVY DRAFT STALLIONS, MARES, AND SPANISH JACKS.

WOLF AND FOX HOUNDS that will catch and kill.

PET STOCK OF ALL KINDS. PURE BRED POULTRY, all varieties.

We can please you both in Quality and Price

L. H. WHITE, Prop.

COGSWELL, N. D.

all she needs at this time is water to drink that is not too cold. Give her a little feed the second day but you will be surprised how little you ought to give her. Increase this a little daily and get her on full feed about two weeks after farrowing. If this is done it will avoid the pigs getting the scours which rarely kills many, but they do not thrive well after it. Thumps, which will kill many pigs', can also be avoided in this way. Thumps is a result of young pigs' getting too fat. See that the pigs get a chance to run outside of the pen where they will have plenty of room to exercise in; this will assist in avoiding thumps also.

Pigs at birth have two sharp-pointed teeth on each side of their jaws. If not removed they are apt to make the teats of the mother sore with them and also sore one another's mouths by fighting together. These sores make infection possible, consequently they should be avoided. When the pigs are a day or two old take them up in your arms and cut these teeth with a small tin-smith's shears.

N. D. Institutes Must Not Stop
See Page Two

Begin 1911 Right

Improve your stock

Aberdeen Angus Cattle
White Holland Turkeys
White Plymouth Rocks

EASTGATE BROE.

Willobank Farm Larimore, N. D

Only \$29⁷⁵ and Up

SENT DIRECT FROM FACTORY TO YOU, FREIGHT PREPAID

Never before in Cream Separator history could you get a high grade Separator—with gears running in a "Bath of Oil"—the superior of any \$85 to \$110 Separator, at such a low, direct-from-factory price as I'll make you. Save \$25 to \$50 this way. I make and sell so many I can afford to make the price as low to you as dealers and jobbers have to pay in carload lots—spot cash—for other high grade Separators.

TAKE 90 DAYS' FARM TEST OF A GALLOWAY "Bath in Oil" Separator

Closest skimmer—Easiest running—Easiest to clean—No trouble oiling or danger of running dry like others, which alone is worth \$50 extra. Costs nothing extra on a Galloway. Send me your name today so I can write you my Special Proposition, at the price I'm making direct to farmers and dairymen, based on my output of 14,500 Galloways this year. I'll also send you my big BOOK FREE. Address—Wm. Galloway, Pres., WM. GALLOWAY CO., 1333 Galloway Station, Waterloo, Iowa

HOLSTEIN CATTLE
THE MOST PROFITABLE DAIRY BREED
Illustrated Descriptive Booklets Free
HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA
F. L. HOUGHTON, Secy., BOX 135, BRATTLEBORO, VT.

ST. PAUL UNION STOCKYARDS CO. REPORT FOR MARCH Comparison of Receipts and Shipments of Live Stock for

	Receipts						Total Cars
	Railroads	Cattle	Calves	Hogs	Sheep	Horses	
C. R. I. & P. ..	327	157	2000	2	99	46	
C. G. W.....	964	657	5610	977	63	128	
C. M. & St. P. ..	4888	1654	16008	1916	69	416	
M. & St. L.	3044	989	16214	814	18	356	
C., St. P. M. & Co	2685	705	21874	2348	46	446	
C. B. & Q.....	217	129	1852	1068	.....	40	
M. St. P. & S. S. M	3832	2635	5585	366	12	229	
Gt. Nor.	7776	4796	18505	5584	3	568	
Nor. Pac.	3055	1506	2519	10870	290	204	
St. P. B. & T. ....	.....	.....	.....	.....	.....	.....	
Driven In.....	704	106	1033	249	48	.....	
Total.....	27492	13334	91200	24194	648	2433	
Increase.....	.....	3681	34534	.....	.....	105	
Decrease.....	6243	.....	.....	7880	99	.....	
Jan. 1 to date	71997	28316	263862	65958	1094	6661	
Average Wts..	778	161	220	99	.....	.....	
	Shipments						Total Cars
	Railroads	Cattle	Calves	Hogs	Sheep	Horses	
C. R. I. & P. ..	2308	459	722	101	7	84	
C. G. W.....	3396	582	37	503	.....	117	
C. M. & St. P. ..	5036	1431	22252	9532	141	444	
M. & St. L.	1325	568	.....	.....	.....	48	
C. St. P. M. & O.	2182	1903	776	295	19	103	
C. B. & Q.....	2800	696	97	1992	182	101	
M. St. P. & S. S. M.	354	70	141	2208	20	33	
Gt. Nor.....	360	145	.....	40	41	22	
Nor. Pac.....	319	104	94	97	93	29	
St. P. B. & T. ....	.....	.....	.....	.....	.....	.....	
Driven Out....	425	353	150	43	154	.....	
Total.....	18505	6311	24269	14811	657	981	
Increase.....	.....	2944	13200	.....	.....	69	
Decrease.....	2595	.....	.....	2445	180	.....	
Jan. 1 to date	45482	9653	74019	39007	1031	2393	

Comparison of the Origin and Disposition of Live Stock

	Origin of Live Stock Received						Total Cars
	States	Cattle	Calves	Hogs	Sheep	Horses	
Minnesota.. ..	21144	11707	76007	10917	168	1918	
Wisconsin.....	795	725	5065	240	19	112	
Iowa.....	307	.....	363	.....	144	30	
Far South.....	84	.....	.....	1118	.....	8	
So. Dakota	1875	307	5431	247	20	137	
No. Dakota....	3256	539	4080	672	24	167	
Montana.....	31	.....	.....	11000	192	55	
Far West.....	.....	.....	.....	.....	81	3	
Man. & N.W.T. ....	.....	.....	.....	.....	.....	.....	
Far East.....	.....	.....	.....	.....	.....	.....	
Returned.....	.....	56	254	.....	.....	3	
Totals.....	27492	13334	91200	24194	648	2433	
	Disposition of Live Stock						Total Cars
	States	Cattle	Calves	Hogs	Sheep	Horses	
S. St. Paul P'k'rs	8164	8560	66900	13903	.....	.....	
Cy. & St. Butch....	552	305	306	591	.....	30	
Outside P'k'rs	21	398	20125	.....	.....	182	
Minnesota	2331	840	.....	746	236	106	
Wisconsin.....	2291	227	141	.....	37	89	
Iowa.....	5315	2164	1625	191	2	204	
Nebraska.....	125	100	.....	.....	.....	4	
Kans. & Mo....	1171	113	.....	.....	.....	34	
So. Dakota.....	414	1036	.....	.....	19	30	
No. Dakota....	.....	140	.....	.....	37	4	
Mont. & West	69	3	.....	.....	6	4	
Far South.....	.....	.....	.....	.....	.....	.....	
Man. & NWT	.....	.....	.....	.....	16	1	
Mich. & E. Can.	24	10	.....	440	156	10	
Chicago.....	2065	140	73	12503	.....	126	
Ills (ex Chicago)	3729	719	97	.....	3	117	
Eastern Points	398	6e	1902	340	145	39	
Returned.....	.....	56	.....	.....	.....	1	
Totals.....	18505	6311	24269	14811	657	981	

Poultry Department

Geo. Hausmann, Hillsboro, N. D.

IMPROVING THE QUALITY OF EGGS

An active campaign for the improvement of farm eggs in the Middle West was undertaken last summer by the Bureau of Animal Industry of the United States Department of Agriculture. This work was preceded by a general survey of the field in the spring of 1908, which showed that an enormous loss was being sustained annually as the result of spoiled and deteriorated eggs. This loss results from the ignorance, carelessness, or indifference of the farmer and from the dilatory and unsatisfactory methods of marketing in vogue. The actual money loss is suffered mainly by the farmer, while the loss in quality is borne by the consumer. A report of this preliminary investigation was published as Circular 140 of the Bureau of Animal Industry.

The campaign of the past summer had for its ultimate end the improvement of conditions surrounding the handling and marketing of eggs, and consequently the improvement of the quality of the egg itself as it reaches the consumer. Coincident with such improvement there will be a saving to the farmer of a great part of the money loss at present sustained.

The efforts have so far been directed mainly to education in better methods, cooperation with egg buyers and state authorities, and experimentation. The actual work has been done mostly in the state of Kansas. The educational work has been done by Department field men going among the farmers and impressing upon them the necessity of keeping eggs intended for market in a cool, dry place and of marketing them frequently. Incidentally they have given the farmers help whenever possible in the practical management and breeding of poultry, and have urged the keeping of purebred poultry.

The Bureau sought and obtained the cooperation of the egg buyers of Kansas, and as a result the "loss-off" or quality system of buying was brought into use. By this system the bad eggs are rejected and only the good eggs paid for. There is no measure which has such a definite and far-reaching influence for the improvement of the commercial egg as the general adoption of this system of buying and selling. The state food authorities also cooperated by prosecuting under existing state law cases where bad eggs were sold. On account of the material improvement ef-

fect in the Kansas eggs, the movement has spread to adjacent states, and efforts are being made to secure uniform legislation in many of these states so as to establish the loss-off system of buying at least during the hot months. In the work of investigation various lots of eggs were traced from the time they were produced on the farm until they reached the packing house, in order to determine the factors causing deterioration and to study how conditions of handling and shipment may be improved.

The results thus far have been so satisfactory that it is proposed to continue the work in Kansas in about the same manner during the coming summer.

HENS LAYING AWAY THEIR EGGS

With the breeding season at hand, and spring as well, the average chicken in this state commences to lay. The fowls do not do so because they enjoy to lay, but because they must. It is always a pleasure to those who gather eggs to bring in a big pail or basket full of them. There are, however, a goodly portion of fowls that will not use the nests put up for them to lay in, but will lay away in the barn, horse and cow cribs, hay and straw stacks, some even go so far as to lay away in high grasses and weeds. Off and on a child will find such a nest, but as a rule they will not be noticed until the hen makes her appearance with a whole raft of little chicks. This too would not be so bad, if this happened early in the season, but it happens mostly during July and August, some even in September, some very extreme cases in October. It is then a very pitiful sight to see them standing around and peeping, with no possible chance to get their feathers by winter. The remark that is then heard so often is, "That old stupid hen had to steal a nest so late in the season yet."

As a general rule you will find that it is not the stupidity of the hen, why she was induced to lay away, but the short sightedness of the person who put up the nests that simply did not suit the hens.

The nests in the average chicken house are put on the wall, or at least where there is the most light. This reason alone is enough to make it disagreeable for the fowls. Besides this the house during that time will be hot, and filled with foul air, caused by the

50 Best Paying Varieties Pure-Bred Chickens, Ducks, Geese, Turkeys, Eggs, Dogs and Incubators. **All at Low Prices.** Send 4c. for my Book which gives reliable information worth many dollars to you **W. A. WEBER, Box 926 Mankato, Minn.**



S. C. Buff Orpington S. C. Black Orpington

M. Bronze Turkeys, M. Pekins Ducks and Indian Runner Ducks.

"THE BEST IN THE WEST"

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N. Dak.

BARRED ROCK

Choice Stock and Fair Treatment.

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BUFF WYANDOTTE EGGS for hatching, Fowls for sale. Also twelve breeds of Fancy Pigeons. **M. B. NOBLE, Hillsboro, N. Dak.**

PETERSON'S BARRED ROCK

Bred to Lay and Win. Won over 90 prizes. Eggs from utility stock \$5.00 per 50 \$8.00 per 100. Mating list free. **PETERSON BROS. Harwood, N. D.**

HAUSMANN POULTRY FARM

Breeders of W. Wyandottes and S. C. W. Leghorns **Hillsboro, - North Dakota**

PURE WHITE WYANDOTTE Eggs for hatching \$1.50 for 15, \$7.00 for 100, \$14.00 for 220. **E. A. Tow, Lisbon, N. Dak.**

S. C. W. LEGHORNS

Prize winners' stock for sale. Eggs a specialty. **GEO. A. FOWLER, Box 486, Casselton, N. D.**

SILVER LACED WYANDOTTES

Thoroughbred, Wide Open Laced, Big Utility Birds, Bred for Business. Tested Fertile Eggs for Hatching, 15 \$1.50; 30 \$2.75; 45 \$4.00; 100 \$8.00. Satisfaction Guaranteed.

Anthony Elm, Lansford, N. D.

WHITE WYANDOTTE eggs for sale from good stock.

M. C. JAMES, Valley City, N. D.

POULTRY BRED FOR LAYING

See my big circular before you place that order for eggs. It will please you. It's free, 2 cent stamp for mailing. **Mrs. B. F. Wilcoxon, Hillsdale, Wyo. Dept. 5.**

WHITE AND BUFF WYANDOTTES that always win. Choice stock for sale. **EGGS** for hatching from pens of well-selected stock, sure to produce winners. Prices reasonable. Satisfaction absolutely guaranteed. Write me your wants. **L. O. CUMMINS, Casselton, North Dakota**

FOR SALE. M. B. Turkey Toms, raised from our Diploma Stock, \$5.00 and up; also Eggs from 26 varieties poultry. Catalog free. **L. GULDEN, Osakis, Minn.**

Rose Comb Black Minorcas

Eggs for sale, \$2 for 15 eggs.

C. WYSH, CASSELTON, N. D.

PURE BRED WHITE PLYMOUTH ROCKS Eggs at \$1.50 per 15, \$8.00 per 100. Eggs from R. C. Brown Leghorns at \$1.25 per 15, \$7.00 per 100. Eggs strictly fresh and fertile. **L. G. Gemmill, Edinburg, N. D.**

rotting of the droppings, which in all probability had not been cleaned away for a month or more. Last and probably the worst, the nests will be filled with mites and lice, for which reason the hens would not like to sit on the nest to pass away time.

Can a person, therefore, blame a hen, if to avoid such places she follows her own instinct and places her nest in a place where such evils are not found?

To avoid the laying away as much as possible, the nests will have to be placed so as to come as near to the hens' natural instinct as possible. By nature a hen loves to lay in dark places. Above all the nests must be free from lice and mites. At least once a week the straw ought to be taken out. Before replacing it with straw again, paint the inside with some liquid lice killer or they may be whitewashed.

Then an egg is left in the nest, best a glass egg, and the hens are not disturbed too often. The barn is kept good and clean, so a good odor can prevail. A hen under these conditions will not be very apt to lay away, and the loss of eggs laid away will also be overcome at the same time.

Selecting Eggs for Hatching

In selecting eggs for hatching, great care should be exercised. There is great difference in eggs and altho it is not generally known, it is possible to arrive at some idea of their possibility of hatching before they are put into the incubator or put below the hen. An egg which is to produce a strong chicken, should have a shell which indicates an even texture. If, by holding it up to a strong light, the shell appears to be porous or patchy, or there is a ridge or thickness encircling the eggs at some point, or a roughness on both or either ends discard such eggs, and do not try to hatch them, for you will be disappointed. In a fresh egg the air cell is always small. As the egg becomes older, the air cell increases in size. A few practical tests will teach you the difference, so that you can quickly make the proper selection.

PURE BRED POULTRY

Mrs. B. F. Wilcoxon

The average poultry raiser who has never had pure bred poultry in his yard looks upon such as if there were something mysterious about them. They see them at the fairs, poultry shows, etc. I have often heard some of them say, "Oh, well they are all right to look at" and I have often thought that they would be of little value to those who think that fowls ought to obtain their own living during the winter and still lay eggs.

Pure bred poultry are what they are largely because of the feed and care they receive. We might breed the best strains of any breed, for years and pay the best attention to the mating of the fowls, yet if we give no thought to feeding no progress will be made.

Feed is needed to develop fowls. Something more than feed and care is needed. We must give the right kind of feed. I must supply the needs of the fowls, the purpose for which it is kept. To utilize its food for the purpose it is supposed to use it, is the underlying principle that distinguishes purebred from a mongrel that has not been bred for any particular purpose.

Without cleanliness there can be no success in the poultry business. One may attend diligently to all other matters in the raising of chickens, but if we fail here, all of our other care and industry will count for nothing. Many

get acquainted with several millions of poultry mites which have taken up quarters in their poultry houses, and levy upon their hens for subsistence. Raising chickens requires intelligence, watchfulness, patience and the grace of being everlastingly at it. I do not mean that one must be in the poultry-yard all of the time or even a great deal of the time. I mean that we can afford to have some intelligently arranged plan about our chicken business and that we cannot afford not to carry it out. I know of no other branch of livestock that there is more profit in than chickens. The one who thinks it is small business, is not in possession of the facts about it. It pays well to have good stock and to take good care of it. If chicken-raising is not profitable to any one it is very likely because he allows it to go at haphazard. Why not put method and skill into it as in to other stock raising?

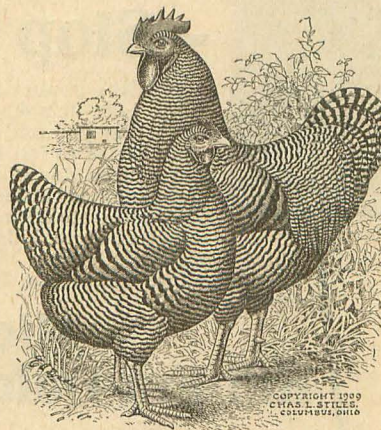


125 Egg Incubator and Brooder Both For \$10

Why pay more than our price? If ordered together we send both machines for \$10.00, and pay all the freight charges. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery underneath the egg-tray. Both Incubator and Brooder shipped complete, with thermometers, lamps, egg-testers—all ready to use when you receive them. All machines guaranteed. Incubators are finished in natural colors showing the high grade lumber used—no paint to cover inferior material. If you will compare our machines with others offered at anywhere near our price, we will feel sure of your order. Don't buy until you do this—you'll save money. It pays to investigate the "Wisconsin" before you buy. Send for the free catalog today, or send in your order and save time.

WISCONSIN INCUBATOR CO., Box 68, Racine, Wis.





Harty's Barred and White Rocks

Eggs \$2.00 per setting

\$5.00 for 50

From Very Choice, Carefully Selected Pens.

H. C. HARTY,

Omamee, North Dakota

Eggs for Hatching

Barred, Buff and White Rocks, Buff and White Dots

Rose Comb Reds and Buff Cochins

Seventy Prizes at State Shows

Forty Splendid Cockerels for Sale, \$2 to \$5. Eggs \$2 per 13

H. P. Cooper, Casselton, North Dakota

North Dakota Institutes MUST NOT STOP

On Page 2 the North Dakota Farmer makes a liberal offer to all who wish to help keep the Institutes going. Are you with us? Do it now.

Elementary Agriculture

McNeal. C. James, Editor

ORNAMENTAL PLANTINGS

McNeal C. James

Few people there are who do not love trees, shrubs and flowers. Even these have an ever recurring appetite for vegetables. Hence, our topics for study this month are quite interesting to all. These things, however, have been sadly neglected both at the home and the rural school in too many communities in our state. Much will be done in the near future along the lines of ornamental plantings and school gardens. There will be many failures and some successes. But if this is the experience of those who take part in this move, it should not discourage towards further effort. All life is made up of successes and failures, and he only is a success who, when he falls, measures his length upon the ground towards the goal.

We shall try to consider a few principles of planting which diminish the likelihood of failure. We shall consider the where, what, how and when of planting.

There are a few simple rules of planting which answer some of these questions well. These have been called the a-b-c's of landscape gardening. They are:

- Plant in groups.
- Avoid straight lines.
- Leave open spaces.

When one observes these rules he is following Nature's plan, the one most popular in America. The school house or the dwelling house should be thought of as the central figure in the landscape. The plantings are to be used then to bring out or emphasize the chief features, and make the house look as tho it belonged where it is. Plantings may also be used to screen some unsightly building.

Keeping these things in mind we will plant at the base of the house to make it blend with the lawn. These shrubs should be grouped along the base of the building at the corners, along the walks in the curves and angles, along and in the angles of the fence, and around unsightly buildings.

Plantings should never be placed in the middle of a lawn or playground. Large, long stretches of grass are always desirable. Besides, the children must not have their playground encroached upon. The trees and shrubs along fences can be grouped and placed in such a way as to destroy the straight line effect. Trees may be set in groups of three to five, placing them about fifteen to twenty feet apart. Shrubs

should be grouped leaving a few feet between individual plants. Single plants may be used sparingly. If the school yard is large enough to grow a shelter-belt without causing snow to drift about the buildings one should by all means be planted on the north and west sides.

Contrary to the thought of some people we have a good list of trees and shrubs which are quite hardy and will do well in this state if given a fair chance. In the way of trees we have the following.

Elm	White Willow
Ash	White Willow
Box elder	Cottonwood
Hackberry	Scotch pine
Poplar	Bull pine
Golden Willow	Colorado blue spruce

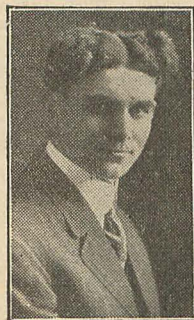
Some of the shrubs and vines are:

Tartarian honeysuckle.
Siberian pea tree.
Japanese and Siberian roses.
Lilac.
Bridal bower or Meadow sweet
Wild plum
Buckthorn
Buffalo Berry
Sumac
Woodbine (Virginia creeper)
Clematis

Most of these trees and shrubs are recommended by Prof. Waldron. All are growing in the Valley City Nursery and in many parts of town.

The best time to plant is in the early spring. The ground should be plowed the year before if possible. Never plant in sod. If the plantings grow at all they will disappoint one by the slow growth they make. A good sized hole should be made so that the roots can take their natural direction. Trees should be set from four to eight inches deeper than in the nursery, shrubs about two inches deeper.

When the trees are set, care must be



Anton Mickelson

1,000 Gophers Cost You at Least \$100.00 —Stop That Big Loss

EVERY gopher costs you 10 cents, and there are about 1,000 in a 40-acre field. In the face of such figures, can you still keep on keeping gophers? But perhaps you've tried to kill them and failed. That is why we know you will be doubtful of other poisons; but Mickelson's Kill-Em-Quick is different—and better than any. Its peculiar odor and taste attract gophers and other field pests. And the minutest atom kills a gopher. *They eat the poisoned grains* quicker than the others. To the many farmers who have used strychnine, we submit the following facts and figures to prove how superior

Mickelson's Kill-Em-Quick Gopher Poison

is. The wholesale market price shows that one ounce of strychnine can be sold at \$1.00—with a fair profit. And one ounce of strychnine kills about 874 gophers under most favorable conditions. But strychnine is very insoluble and a great quantity of water must be used to dissolve it and a great amount of grain must be added, to absorb the liquid mixture. Thus its strength is so reduced that it takes an average of 20 grains to kill one gopher. But, as strychnine is excessively bitter, only about one-third of the gophers eat enough of it to kill them. A 75c box of Mickelson's Kill-Em-Quick actually kills 2,000 gophers. It is guaranteed to do so, or you can get your money back. So you can easily

See How Much Better and Cheaper It Is Than Strychnine

Furthermore, strychnine is hard to handle, unsafe to leave around, and expensive to mix and care for.

The \$1.25 box of Kill-Em-Quick contains twice as much as the 75c box, and is guaranteed to kill 4,000 gophers. Farmer Equity Societies, County Commissioners, Township Boards and other large buyers can secure our standard quantity price by writing direct to us. Let me send you some more interesting facts that show the many advantages and the superiority of Mickelson's Kill-Em-Quick Gopher Poison. Send me a postal now.

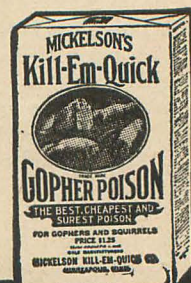
ANTON MICKELSON, President

Mickelson Kill-Em-Quick Company

1429 Washington Ave., No.

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Minneapolis, Minn.



taken to press the dirt around the roots especially near the base of the trunk. Never throw in dirt and stamp it down, but work dirt around the roots by hand first. After most of the roots are covered in this way the dirt may be stamped in with the feet, until within three inches of the surface of the ground. The last three inches of soil should be kept loose. If the ground is dry, water should be added before the last three inches of dirt are filled in. Water should not be added while the tramping is being done as this tends to make the ground hard. It is often a good plan to dig the hole the day before and add water to it the evening before the planting is done.

The ground around all plantings should be cultivated during the growing season every week to ten days, to save moisture. This makes a good place for the growing of small vegetables or annual flowers such as nasturtiums, pansies, flax, etc. Where trees are not cultivated they should be mulched with a few inches of straw.

If these precautions are followed there is no reason why most of the plantings made will not grow. If school is not in session during the summer, a committee of older children should be appointed to look after the plantings during vacation. The writer has seen this done very effectively in more than one country district. Besides most of the planting should be done by the pupils after the ground has been prepared. For the interest aroused in the children, and the actual experience they get from doing the work are the most important results of the work.

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N. D. Bulletins 49, 59, 74 and 88.
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N. D. Farmers' Institute Report, 1909. Page 200-214.

PROPER SELECTION OF BARLEY SEED NECESSARY FOR MAXIMUM CROPS IN 1911

H. B. Derr, Agronomist in Charge of
Barley Investigation

The unfavorable weather during the growing season of 1910 caused a considerable decrease in the production of barley thruout the Northwest, and much that was produced was shrunken and inferior in quality. Owing to the scarcity of the crop the market prices have remained high, and there is a tendency in such cases to retain seed of inferior quality for seeding at home.

The six-rowed barleys seem to have suffered the most from the drought and this is easily explained. The heads are made up of spikelets in sets of three, one median and two lateral. The median one is usually the largest and plumpest; the lateral are always small-

er, more slender and twisted. When affected by drought the lateral spikelets are reduced in size and at times consist of but empty glumes, or, at most, contain only small kernels which germinate poorly and produce weak plants.

Judging from the samples of barley obtained this winter from farmers, and also that offered by some seed houses, there is considerable of this shrunken barley being handled in the Northwest. If this seed is sown the crop of 1911 will, in all probability, be disappointing.

The seed should be thoroly cleaned and graded before planting. The fanning mill will not always remove the weak kernels, especially if they contain a large amount of hull. A simple and inexpensive method for cleaning and grading barley is to immerse the seed in a tub of water, and stir thoroly. The light, chaffy, and diseased grains, as well as weed seeds, will float on top and can be skimmed off, while the plump, viable seeds will sink to the bottom. If formalin be added to the water, at the rate of one pound to 40 gallons, the seed can be treated for smut at the same time.

The specific gravity, or skimming process, is not recommended to take the place of the fanning mill, but should, wherever possible, be used in connection with it. Wherever tried this method has given excellent results. In 1910, at the Arlington farm, Virginia, the yield of barley was increased nearly 20 per cent.

BUREAU TO DISTRIBUTE SEED

Arrangements have been started for the establishment of a bureau at Fargo, N. D., thru which the big seed companies will distribute good flaxseed to farmers who used it.

Farmers in North Dakota are urgently requested to send samples of their flax seed to Prof. H. L. Bolley, of the North Dakota Agricultural Experimental station. The seed will be examined without charge, and the sender will be notified if it is sufficiently good to go into the ground.

CHOICE ALFALFA seed, that has stood our winters and drouth for more than 20 years; for farmers' price and samples, write
J. L. Maxson, Buffalo Gap, South Dakota

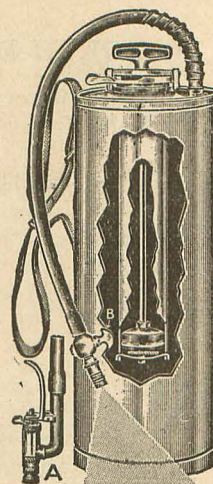
Brown's Auto-Spray No. 1

The Only Practical
Compressed Air Sprayer

Declared by Agri. Col.
"Absolutely O. K."

Fully Warranted

More than
250,000 in Use



PATENTED.

Write for descriptive literature

SAVE YOUR
Trees, Plants and
Vegetables

Insects, Worms and Fungi
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Don't Wait

The Bugs are Ready
Are You?

For sale by **Hubert Harrington** Fargo, N. D.

North
Dakota
Grown

SEED CORN

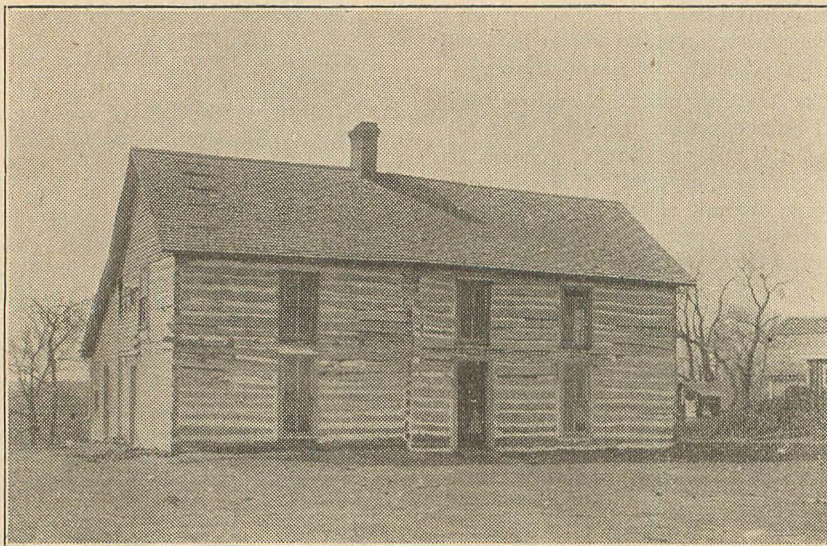
Kiln Dried
Selected
and Tested

The best seed corn we have ever offered. It pays to plant the best and that is what you get when you buy from us. Order today—the supply is limited. We have a good stock of very high grade seed wheat, oats and barley.

Alfalfa, Clover, Timothy and grass seeds are scarce this year, but our stock is the very highest test and will prove their worth when harvest time comes. Your order should not be delayed if you want good seed. Send today for our 1911 seed catalog. It is free to you.

FARGO SEED HOUSE, Dealers in strictly high-grade seeds
FARGO, - - - NORTH DAKOTA

Home Department



The First House in Dunseith

A SONG TO NORTH DAKOTA

Air: "Shouting the Battle Cry of Freedom"

By S. A. Muel

Come all you sons and daughters
And we'll sing another song—
Sing a rousing song to North Dakota;
And we'll sing it with a courage, Boys,
A courage true and strong—
Sing it true and strong for North Dakota

Chorus

Dakota forever! Hurrah, boys, hurrah!
We'll stand by her colors, obey all her
law;
And we'll pledge our hearts and hands
That we'll ever loyal be—
Ever loyal be to North Dakota.

Of all the states and territories
In the East or West,
The fairest to us is North Dakota;
We love the fairy flax
And the golden wheat the best;
We love the rolling prairies of Dakota.

We are loyal to the Nation,
Its colors e'er shall be
Hailed with delight in North Dakota;
And we'll proudly bear aloft
That Banner of the Free
To the bracing air of North Dakota.

WOMEN AS MANAGERS OF POULTRY YARDS

Mrs. B. F. Wilcox

Woman's successful management of a poultry farm depends primarily upon the natural taste for the business sufficiently to embrace a love for as well as an interest in fowls. She must have a capacity to manage details—ability to direct hired help, if such is needed. She must have a power to understand the market and have good judgment in regard to the merits of the different breeds. There are many notable examples of women who have succeeded with poultry

raising. I know many who are good fanciers, many good commercial poultry raisers. Poultry farming is a hobby of mine, because I know it is one of the most healthful out-door occupations that women can enter. Women, perhaps need hobbies even more than men do, their lives are more circumscribed. Woman is often held to home by a thousand ties which she would not loosen if she could and could not if she would. Let her have a hob-

by then, which directs her thoughts from her small cares.

A great many have a taste for country life and natural capacity for the management of a farm—to poultry raising the raising of fruit can be combined profitably. Who is adapted? The woman who may become a good manager of a household has the qualities which insure success as poultry raiser. Women would not be poultry raisers if they had not a decided and strong taste in that direction. If one is endowed with that taste all else follows easily. If we care for poultry—we like to see it—this trains the eyes to recognize a type and to estimate a correct value from it, enables one to detect the conditions which in the beginning may make the difference between success and failure. A prime requisite with poultry is that it is kept comfortable. The sympathetic nature in women leads her to provide for comfort, then her care for appearance has real value. In the market is the final test of our ability to produce. It is in this place where we differ from women in all other callings. We are not handicapped by our sex. We have never had a discount proposed because it was owned by women, while on the other hand no matter how well we teach, clerk, etc., we find an inevitable discrimination against us in the pay offered for our ability in those lines.

Poultry farming affords a profitable outlet for intelligence and energy with independence, if we are fitted for this work we will find a perpetual charm in poultry raising. It gives us an opportunity to maintain a home where others may find refuge. There is no monotony in such a life. We have the poultry papers, fairs and shows—these keep the mind alert and the interest engaged. The woman engaged in it finds that the business of poultry raising is projected on such a generous scale that she has no fear of others in the same business. Then, too, the poultry farmer is her own boss. She is mistress of the situation. The business is hers. Don't be an amateur in the work, bend all of your ability toward becoming a professional. If women who half starve trying to teach, clerk, etc., would only employ their time raising poultry for the market they could make a fortune. If nine-tenths of the actresses would put as much time and study on the characteristics of the hen as they do studying Lady Macbeth, they would be walking on velvet instead of beating the hard pavements looking for a job. If nature intended you to do this work, do it. A successful foundation with poultry is first made by going into details in regard to the little things in the beginning. The present day farmer is the man of the

See Page Two

hour, (be it man or woman) who has already made a success in cattle and hog raising. You will not find a practical farmer who has already made a success fail if he or she undertakes poultry. Why? Because they go about it on business-like principles with no thought of failure. There is nothing about poultry farming that woman cannot do if she is so minded. I see women in poor health reaping a good harvest, both physically and financially in the poultry business. I wonder why more women do not indulge in this health-giving business. Often women are left companionless on the farm. Why not try poultry-raising instead of moving to the city to find something to do to eke out a mere existence?

Did you ever attend a poultry show and notice how many women exhibitors there are? Some of the largest poultry plants are owned and run by enterprising women. So many write me, "What branch of the poultry business shall I take up." You will have to decide for yourself; so much depends upon the location, demand, market, etc. For the farmer's wife I think egg production about the best branch. Let us remember the principle that small things are not despicable, a drop of water helped to make an ocean, a grain of sand aids in building up a continent, and a single hen helped to make possible an annual increment of millions of dollars to the national wealth. Small as it may be, the business of one poultryman, it is a business whose proportions are almost inconceivable. The hen is great and we will take off our hats to her income producing powers.

I WONDER WHY

In youth I labored hard at school;
I could repeat the lengthy rule
That told how the cube root is found;
My boyish brain whirled round and round

With all the mazes of the rule—
Yet never, since I went to school,
Have I a cube root yet discerned
Nor used the rule that then I learned—
I wonder why?

Full oft, in hazy memory,
I call to mind the G. C. D.
What was the thing? Why was it sought?

O, what prodigious, painful thought
I spent on it, and how I'd fret
The dodging G. C. D. to get!
An still in all the years to me
Has never come a G. C. D.—
I wonder why?

And fractions, too, I multiplied,
I turned them up, or on one side,

And added them, or used some trick
To get the answer right and quick.
Yets in my brave diploma came
I must confess—perhaps with shame—
I've never had to multiply
A fraction when I sell or buy,
I wonder why?

Old Euclid, too—I toiled with him;
I tackled diagrams with vim;
And cones and other things I wrecked
While various angles I'd bisect.
Dots, circles, lines and flying arcs
And all the cabalistic marks
I've never used since that far day,
They do not help me draw my pay—
I wonder why?

The algebraic mysteries
Once were as plain as A. B. C's.
I could stretch x's, y's and z's
Across the board and then with ease
Could solve, altho my mind 'twould vex,
The problem showing what was x,
Yet since I left the schoolhouse door
I've fathomed x plus y no more—
I wonder why?

Chicago Post.

DRESSING FARMS FOR THE MARKET IS WORTH WHILE

Would you go to church on a bright Sunday morning garbed in your work-day apparel, and expect to receive the attention usually awarded you when dressed in neat and clean raiment? Certainly not. Then, would you hope to receive what is due should you have a farm for sale, if that farm happened to be unkempt and slattern in appearance?

The questions are asked because it has been remarked that many farms placed upon the market are allowed to remain in a condition most uninviting to the eye of a prospective purchaser. Cumulative carelessness produces no dividends. Numbers of farms for sale have continued to remain undisposed of in many instances, not because the soil was of low grade, but because the general ensemble of the outfit was "down at the heel."

First appearances and impressions are the most lasting, hence the necessity of putting your property in spick and span condition. One of the most notable sore spots in a farm's looks is a dilapidated fencing system. Should the fences be down here and there, or sagging badly, the symmetry of outline is destroyed, involving a discount from a utilitarian point of view.

Are the hog pens unspeakably filthy; are the odd corners filled with refuse and discarded odds and ends? Is the condition of the outbuildings just what it should be, and is the place weed ridden? If weeds cost more

than taxes, what shall be the cost when the sale of the farm is involved?

It pays to give the farm machinery a thoro overhauling and cleaning, while the windmill and pump would be the better for a coat of paint. Not the least of the things that go toward making a farm more salable is the condition of the house.

While the interest of a buyer is centered most conspicuously in the land, together with the stock—if the latter is to be sold—still, the tidiness of the farm as a whole is a very large factor in obtaining an enhanced figure. To all these suggestions it might be replied that the average farmer is so hard pressed in giving attention to the daily necessities in the operation of the farm that he has no time to devote to the "beautifying" of the place.

There is time for everything, however, especially if the pocketbook is immediately involved. "Make time" is the better resolve, for in making time you also make money and add to the satisfaction of yourself and the buyer when the deal has been closed.

An unattractive farm lacks in its selling possibilities at least twenty per cent of the one which is smartly dressed for the market. Is it not worth while?—American Farm News

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HOME DRESSMAKING



A woman past forty, whether stout or slender, must give critical attention to the lines of her figure. Half the value of her appearance is attained by correctness of line, tho the shape and the placing of the belt, yoke and collar may make or mar the finished costume.

Long lines are generally becoming to both stout and slender figures of mature years, and front and back gores in panels help to give the appearance of slenderness. This effect is not destroyed when the panels are broken half way down or lower, by the introduction of plaits or perhaps a band of trimming.

Coats having unbroken lines from the shoulders down are

in good style for the woman who has large hips. They tend to give a straighter silhouette. It is as great a mistake for the stout woman to be tightly fitted across the bust and thru the waist, as it is for the slender woman. It makes her size more apparent, whereas an easier adjustment softens the lines. The low closing of the Spring coats, with the deep V opening above, gives a surplice line that is very becoming. Ottoman, shantung, smooth finished worsted in mixtures and in stripes, French serge and homespuns come in smart weaves particularly adaptable for such coat suits as those shown above. The light gray, lavender and the very light brown mixtures are especially fashionable.

French boucle in light weight is one of the charming Spring fabrics. It was used for the suit at the left (3462-3623) with black moire for the collar and cuffs. The cloth, in this development, was of a light amethyst shade and there was an irregular dash of black in the heavy horizontal thread. The straight lines of the coat are becoming to the figure of an older woman.

Plaits are laid in the seven-gored skirt, but are stitched flatly down to flounce depth. This arrangement of fullness in the skirt is of especial value, as the straight lines are retained. Wool-back satin or satin ottoman is excellent for the suit.

The sizes of this jacket are 32, 34, 36, 38, 40 and 42 inches bust measure. Size 36 requires 4 yards of 36-inch material. Skirt sizes are 22, 24, 26, 28, 30 and 32 inches waist measure, size 26 requiring 60 yards of 36-inch material. For the medium size the entire costume requires 82 yards of 44-inch material.

Chiffon broadcloth in a light brown shade would be very attractive for the costume 3590, and wide fancy braid in two or three blended tones of brown would make an effective finish. If the pattern is cut out for a square neck, a yoke and collar of fine lace might be used. This gives a suggestion of dressiness to the gown. Buttons and simulated buttonholes at the left side of the front panel give the effect of a side closing, tho the dress really closes at the back. This would be a handsoame street and afternoon frock worn either with or without a wrap. The design is adaptable to satin, cashmere, serge and worsted fabrics. Foulard and crepe voile would be very practical for it. The pattern sizes are 32, 34, 36, 38, 40 and 42 inches bust measure, and the medium size requires 40 yards of 54-inch material with 5 of a yard of 18-inch all-over lace for yoke and collar and 3 yards of banding.

The costume of satin finished gray silk (3596) was trimmed with wide bands of rich purple braid. Long, graceful lines are given the figure by the front panel and the bands at each side of it. The yoke and collar were made of dotted net. The dress closes at the left side of the center front and the six-gored skirt has a flounce which is slightly circular. This is an excellent design for henrietta, satin, tussah royal, and silk and wool poplin. The patterns are in sizes 32, 34, 36, 38, 40 and 42 inches bust measure, the 36-inch size requiring 40 yards of 42-inch material, with 4 of a yard of 18-inch net for the yoke and collar.

The stylish coat suit at the right (3387-3661) is represented in gray worsted having a narrow black stripe. There is also a fancy stripe in a sort of cheviot weave, between the black ones. Fine worsted combining several styles of weave in this way is prominent among the new fabrics. The deep opening in front, the closing to the left and the slightly cutaway effect are pleasing features of the coat. Black satin was used for the collar facing. The skirt is dvWeWin; the eight gores are joined with lapped seams, which add to the smartness of the tailor finish. Black or navy blue serge, gray camel's hair, silk serge and shantung will be stylish for this design. This model developed of rough surface homespun or largeweave basket cloth would be excellent for travel and for wear in the mountains or at

the seashore when the number exodus takes place.

The jacket sizes are for 32, 34, 36, 38, 40 and 42 inches bust measure. Size 36 requires 51 yards of 27-inch material. Skirt sizes are 22, 24, 26, 28, 30 and 32 inches waist measure. Size 26 requires 4 yards of 40-inch material. For the medium size the entire costume requires 55 yards of 54 inch material with 21 yards of contrasting material 25 inches wide for collar facing.

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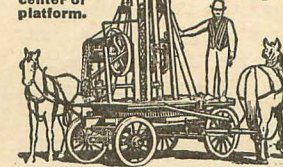
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BOOST N.D.INSTITUTES. PAGE 2

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CHILDREN AND PATENT MEDICINES

By Prof. A. P. Hollis, Valley City, N. D.

A sufficient number of analyses of patent medicines have now been made by Government and other chemists to warrant this department to sound a note of warning against the Patent Medicine Habit. All patent medicines are not dangerous; some are, and the general public does not discriminate—frequently has no means of doing so. The contents of harmful remedies, like Peruna, have been so frequently exposed as to make the name a byword—and yet this alcoholic beverage continues to be sold at the drug stores as medicine and continues its absurd advertisements. After examining the testimony in a suit brought against a druggist in Syracuse, N. Y., for selling Peruna without a saloon license, Prof. Ladd concludes:

"Peruna would seem to be just a plain, mild 'booze,' a form of intoxicating beverage, not a medicine and not a cure for the diseases claimed."

It is a regrettable fact that the drug stores do not help in the campaign against patent medicines. They have taken no part in the exposures of fraudulent remedies. Instead they allow immense window displays to be made advertising the concoction; they send circulars and almanacs thru the mail to their patrons, and apparently are not interested in the campaign now being so successfully waged by welfare organizations against the patent medicine evil.

In many states the better class of drug stores are getting out of the saloon business and the cigarette business, and to that extent restoring the ancient respect with which their high calling was regarded; if they should take a further step and refuse to sell the more vicious of the patent medicines, they would remove the opprobrium that now attaches to their business and be among the most honored and beneficent of callings. Dr. Horatio Wood, Jr., (Popular Science Monthly for June '06) estimates that every year \$100,000,000 are spent in the U. S. alone for patent medicines.

The worst of these are the pain killers, containing cocaine or morphine as the soothing principle, and the exhilarators containing alcohol or strychnine, "to make you feel good when you take it and miserable when you don't."

From the standpoint of child welfare, Dr. Wood declares the soothing syrups to be the most diabolical of all, as they are loaded down with morphine. The

Ladies' Home Journal, of April, 1908, cites the case of a child that became peevish and cross. At eight o'clock the mother gave the child the first dose of medicine, at two or three o'clock in the afternoon the child died. The chemist found morphine in the medicine.

"Two infants, twin babies, three months old, were given a dose of so-called soothing, sleeping 'syrup' one night because they would not sleep. The next morning the mother found both babies dead. The coroner's inquest of the stomachs of the babies disclosed the fact that they had died from the opium contained in the 'soothing' (?) medicine."

In England the Pharmacy Act compels Mrs. Winslow's Soothing Syrup to be plainly labeled Poison.

How many of our readers know of instances where patent medicines resulted in harm? Mere opinions or surmises would be of little value, but well authenticated cases, thru chemical analysis or physician's testimony would be of real value in deterring others from the patent medicine evil.

The Government has published a useful bulletin dealing with habit-forming agents that should be widely read by people everywhere. Send to the Department of Agriculture, Washington, D. C., for Farmers' Bulletin No. 393.

Prof. E. F. Ladd, the famous Pure Food Commissioner of North Dakota, included the following page in one of his recent bulletins:

"The Baby-Killers"

The Food Department of the United States has established a list of medical preparations, "soothing syrups," which are referred to as "baby-killers." The use of this class of products is certainly to be condemned, and the list as given by the United States Government chemists includes the following preparations:

- Mrs. Winslow's Soothing Syrup (morphine sulfate).
- Children's Comfort (morphine sulfate).
- Dr. Fehy's Pepsin Anodyne Compound (morphine sulfate).
- Dr. Fahrney's Teething Syrup (morphine and chloroform).
- Dr. Fowler's Strawberry and Peppermint Mixture (morphine).
- Dr. Grove's Anodyne for Infants (morphine sulfate).
- Hooper's Anodyne, Infants' Brand (morphine hydrochloride).
- Jadway's Elixir for Infants (codeine).
- Dr. James Soothing Syrup (heroin).
- Koepp's Baby's Friend (morphine sulfate).
- Dr. Miller's Anodyne for Babies (morphine sulfate and chloral hydrate).
- Dr. Moffet's Teething Teething Powders (powdered opium).
- Victor Infant Relief (chloroform and cannabis indica).

Readers, what do you think of a list like this? Are you using them, feeding the little ones opium, morphine, chloral hydrate and the like products in order to stupefy and not help their suffering?

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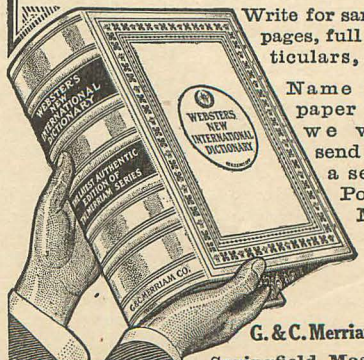
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Seasonable Receipts

Selected from "One Thousand Receipts for North Dakotans"

Calf Liver, Fried

Cut liver in thin slices and pour boiling water over it to blanch it; let stand in water while frying the fat from 6 slices bacon. Take out the bacon; cut 1 large onion in slices and fry brown; then fry the liver in same pan, after drying it on a cloth. After liver is brown on both sides, sprinkle over it a little salt and 1 teaspoonful curry powder. Cover and stew 20 minutes.

Roast Veal Liver

Salt and pepper 1 whole liver; cover top with pieces of bacon fastened on with toothpicks. Roast 1 hour.

Jellied Veal

Use leg of veal. Cook very slowly until tender. When partly cooked, season with salt, pepper, and a little onion. When meat is done, chop coarse. Boil the broth until there is enough only to moisten the meat well. Pour it over the meat; turn into a mold and let stand until next day.

Boiled Eggs Served in Cream

Boil 6 eggs about 15 minutes. Shell and cut off a little of the white so the egg will stand alone. Boil 1 pint of cream and thicken with 1 tablespoonful flour. Season with salt, pepper and a little butter. Pour the cream over the eggs, garnish with parsley and grated yolk of a hard-boiled egg.

Deviled Eggs

Boil 6 eggs half an hour. Shell and cut in two. Mash the yolks, into which mix $\frac{1}{2}$ teaspoonful mustard, $\frac{1}{2}$ teaspoonful salt, $\frac{1}{2}$ teaspoonful butter, 2 teaspoonfuls vinegar and pinch of pepper. Mix thoroly and fill the whites.

Baked Fish

Clean, rinse and wipe dry a fish weighing 3 or 4 pounds; rub the fish inside and out with salt and pepper; fill with a dressing like that made for poultry, but drier; sew it up and put in a hot pan with some drippings and a lump of butter. Bake an hour and a half.

Egg Sauce for Baked Fish

One and one-half tablespoonfuls butter, 1 tablespoonful flour, 1 cupful milk, salt and pepper, 3 hard-boiled eggs. Melt butter, stir in flour until smooth. Add milk and seasoning and stir into sauce, then grate yolks over the top.

Boiled Fish

Tie the fish loosely in cheese cloth so they won't fall apart and boil for $\frac{1}{2}$ to $\frac{3}{4}$ hour in salt hot water to which has been added $\frac{1}{4}$ cupful vinegar. Serve with melted butter or cream gravy poured over.

Bread Pie

One cupful water, 1 cupful sugar, 1 cupful bread crumbs, 4 tablespoonfuls vinegar and nutmeg to taste. This is klie apple pie. Bake with 2 crusts. To be eaten when cold.

Orange Pie

Rind of 1 orange and juice of 2, 2 tablespoonfuls flour, 1 cupful sugar, 3 eggs and 1 teaspoonful of melted butter.

Cream Pie

Yolks of 2 eggs, $\frac{1}{2}$ cupful sugar, 2 heaping tablespoonfuls flour, lump of butter, 2 cupfuls boiling milk; cook over water until done. Flavor and put in crust, previously baked. Frost with whites of eggs.

Sponge Cake

Four eggs, beaten light; 1 cupful sugar, 1 teaspoonful cold water, 1 cupful flour, 1 teaspoonful baking powder.

Sour Cream Cake

One cupful thick sour cream, 1 cupful sugar, 1 egg, $\frac{1}{2}$ level teaspoonful soda, a little salt, $1\frac{1}{2}$ cupfuls sifted flour, flavor to taste. A cupful of powdered sugar mixed with water makes a nice frosting. Substitute molasses for sugar in the above and add ginger to make soft ginger bread.

AN EARLY FRUIT

The earliest fruit, if we may call it such, is rhubarb or pieplant. To start it; get a few roots—they do not cost much. Make a bed for them by deep plowing or spading, enrich with rotted stable manure. Set the roots fairly deep and keep the grass and weeds away from them to at least four feet.

Rhubarb is hardy and if given a little manure and kept free from weeds it will produce an abundance of material for sauce year after year. Besides being so easy to grow it is easy to gather and easy to make into sauce or pie.

Leather upholstering on chairs and leather binding on books may be brightened by rubbing with the white of an egg. This will also clean and brighten gold picture frames.

Salt moistened with just enough ammonia to make a soft mass is excellent for cleaning coat collars.

A good ointment for the chapped or cracked skin on the hands is the following:

Camphor	10 grains
Glycerine	10 drops
Lard	1 ounce

GREATER FARM YIELD

North Dakota Grain Growers Learn Lessons

North Dakota will be farmed this year as it never was farmed before, says the Minneapolis Journal, with old and wasteful methods discarded. A. D. Gaines, who has been raising crops in that state for twenty-eight years, and is now in Minneapolis, believes that benefits too great for calculation are going to follow the opening of an era of better work.

Practically every farmer in North Dakota, by personal contact with some teaching influence or by indirection, has had the idea brought to him and then hammered upon with repetition and reiteration, that the crop losses of last year that cut down the grain yield of the state so materially, were due not to bad weather alone, but largely to poor tillage.

Learn Better Ways

Farmers who had to scale down expenditures and postpone improvement work because their crop promise ran down the scale as the season drew to a close, have heard of other farmers who got good yields and profited by the high prices that ruled. They have asked the agricultural schools, the farmers' institutes, and of themselves, how it was that even on farms where the general outturn was poor, patches of land yielded beautifully.

They have been told that kindness to the land brings kindness from the land, that seed selection, crop rotation and other things are important, but that tillage is the golden word. This year they are out for tillage and are going to become real tillers of the soil in all that the words mean.

All Farmers Interested

"I never saw anything like the interest in good farming that is being shown this spring in North Dakota," Mr. Gaines said, and he added that in his judgment it is the biggest and most important thing that has developed in the northwest since the land was first broken by the plow. For ten years Mr. Gaines was identified with teaching work in Minnesota, and was in the state high school at Alexandria in addition to having taught in the state agricultural college at St. Anthony park.

"I attended the meetings of farmers at Dickinson, where dry farming was the feature, and besides assisting in organizing the New Salem and Washburn farmer clubs. I was present at many other meetings of farmers during the winter in North Dakota. Everywhere the good farming idea was talked and everywhere the farmer seemed to be awakening to the fact

that, to a large extent, the question of good or bad crops is in his own hands.

Years Show Results

"We need not expect that the full benefits of this will be seen this season," continued Mr. Gaines. "It takes two or three years for the dry farming to show what it can do." Part of the plan is the carrying over from one year to another of the moisture in the ground, the elimination of weeds which take up much of the moisture for their growth, and other things that make up the good farming. One season after the farmers take this up in numbers will bring results that will be important, but two or three seasons of such work, continued, will do wonders. That is why I say that the taking up this year by North Dakota farmers of the better tillage plan, is one of the most important things, agriculturally, that ever happened in the northwest."

The farmers of North Dakota, Mr. Gaines said, are opposed to reciprocity and have so declared at meetings held thruout the state.

PAINT POINTS

From Practical Carriage Painting by
M. C. Hillick

White Lead

The name of a thing should not be accepted for all there is to the thing itself. The painter has very pronounced reasons for bearing this fact in mind when engaged in studying and passing judgment upon the materials he finds it needful to use in his business. Probably the most important pigment which finds its way into the paint shop is white lead. This pigment has afforded a theme for increasing discussion, its qualities and adaptability having been extensively canvassed. Numerous substitutes have been introduced during the past two decades, but white lead still retains its pre-eminent popularity. Lead compounds and various adulterated brands have given the painter plenty of trouble, and caused him to devote more attention to the quality of his white lead stock than formerly. Because of its soft, pliable, grain-filling property, its established elasticity, density, body, fine working quality, and its merits as a reliable drying pigment, white lead is the filling up and foundation material par excellence.

Pigments

In respect to the pigments and colors following in the wake of white lead it has been made plain on many a hard-fought field of experiment that the color consumer, the practical painter, the workman far removed from the analytic gentleman of the laboratories, is chiefly

concerned in getting a pigment or color adapted to his needs more completely than any other available one. It may not be chemically pure as the chemists would construe the term; but if it responds satisfactorily to a practical test, it is then serving the painter's practical need.

Oil

In the basic stage of painting, pure raw linseed oil is conceded to be the life of the pigment. Impure or adulterated linseed oil—the spurious, fraudulent article, if you please—has more to do with the premature decay of paint and varnish than one at first thought might concede. During the process of painting there are numerous complications which, by the harsh reality of scientific analysis, could be directly traced to the insidious effects of an adulterated brand of oil. Investigations conducted by competent experts have shown that the self-assertiveness of adulterated oil is determined, not so much by apparent unfavorable effects upon the under coats, but rather from its resistless attack upon the lustre and durability of the finishing varnish. Some of the oils used to adulterate linseed oil are pronounced by such authorities as Hurst and Terry to be good driers, altho, as in the case of rosin oil, they may seemingly dry good upon the surface only to soften up later on. And provided these adulterant oils are not good driers, the people engaged in floating them along the avenues of trade have simply to add a certain proportion of drying japan to O. K. them in this respect.

Turpentine

In respect to his purchases of turpentine the painter should be likewise cautious and investigating. The adulteration of turpentine with headlight oil, or a lower grade of kerosene, and with 112 fire test oil has been, and continues to be, actively carried on. This 112 fire test oil, as employed in small southern distilleries not shadowed by inspectors, shows a list of ingredients closely corresponding to, heavy paraffine oil one-third; kerosene, one-third; light oil, one-third. Thus a gravity is provided which registers about the same as pure turpentine and is therefore very difficult to detect. The naval authorities practice—and it is said, successfully—the old-time test of dropping the suspected turps on a piece of white paper alongside of a pure brand of turps and watching the result. The turps containing the 112 fire test oil will leave, upon evaporation, a faint but decided greasy stain. Pure turpentine not too rapidly distilled will leave no spot. The turpentine containing traces of the crude gum due to too rapid distillation will impart a sticky, yellowish-white stain to the paper and this the painter should not confound with the afore-mentioned greasy stain of the adulterated turps. In our Eastern, Middle, Western, and Northwestern cities the practice of kerosene oil injection is the favorite method of cheating the consumer. The sense of smell will sometimes detect the presence of kerosene, the white paper test will sometimes expose it; and again both tests will fail, along with the other usual ones.

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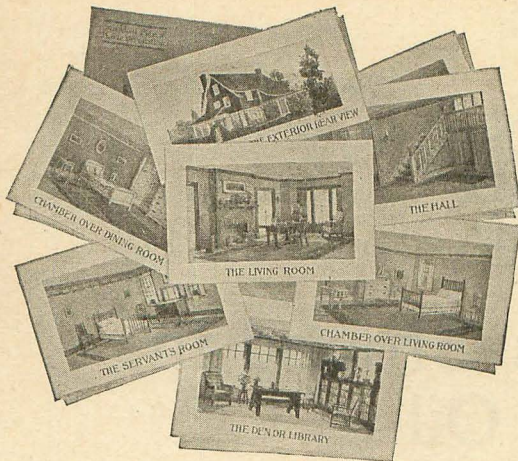
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